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ABSTRACT

The CONSABE (Content Standards for Adult Basic Education) project has been a joint project of the San Diego Community College District and the National Institute of Literacy in Washington, D.C. to develop content standards for adult basic education (ABE). During the project, more than 350 adult students, business leaders, ABE teachers, administrators, and other stakeholders in ABE have participated in the following information-gathering activities: focus groups, student writing contests, citizen surveys, and a review of related projects in which content standards for ABE have been developed. The first draft of the content standards has now been completed. The draft standards contain content for three life roles: parent/family member, citizen, and worker. Also included are three cross-cutting content areas consisting of generative skills for the following: accessing and voicing information; taking independent action, making decisions, and participating in lifelong learning; and fulfilling all three life roles. In the next phase of the project, the draft content standards will be developed further and validated and a variety of activities will be conducted to reform the San Diego Community College District's ABE program to make it more attractive, meaningful, and useful to adult students and more accountable to the public at large. (Twenty-two figures/tables are included.) (MN)

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Final Report

CONSABE
Content Standards for Adult Basic Education
Part One: Moving Toward Draft Standards

VOICES FROM THE COMMUNITY

Thomas G. Sticht
Paul R. Erickson
William B. Armstrong

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Part One: Moving Toward Draft Standards

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CWELL
San Diego Consortium for Workforce Education and Lifelong Learning

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The CONSABE Project was sponsored by the National Institute for Literacy (N(FL) and we are grateful for the support of that institution and especially for the encouragement and thoughtful participation of Dr. Sondra Stein, Project Officer for the Equipped for the Future (EFF) Program and the seven other members of the EFF Program.

The CONSABE Project is an activity of the San Diego Consortium for Workforce Education and Lifelong Learning (CWELL). The opinions expressed in this report are those of the authors and they do not necessarily express the official positions or opinions of the National Institute for Literacy or the members of the CWELL, including the San Diego Community College District, the San Diego State University or the Applied Behavioral & Cognitive Sciences, Inc.

Table of Contents

The CONSABE Project at a Glance

Introduction 1

The National Institute for Literacy (NIFL) "Equipped for the Future (EFF)" Program 1

NIFL's Adult Learning System Reform and Improvement Planning Grant Program 4

The San Diego CONSABE Project 4

Approach 5

Review of Related Projects 8

(1). APL-The Adult Performance Level Study 8

(2). CASAS-The Comprehensive Adult Student Assessment System 11

(3). SCANS: The Secretary of Labor's Commission on Achieving Necessary Skills 15

(4). O*NET: The Occupational Information Network Content Model 17

(5). GED-General Educational Development High School Equivalency Tests 20

Discussion of the Five Projects 22

Voices from the Community 23

The Seven Focus Groups 23

First Synthesis of Draft Content Standards 27

The Student Writing Contests 30

Second Synthesis of Draft Content Standards 33

A Small-Scale Validation Study 35

The New Draft Content Standards: The Beginning of a Process, Not the End 39

The CONSABE Project
At a Glance

What is the CONSABE Project? A joint project of the San Diego Community College District, Division of Continuing Education and the National Institute for Literacy in Washington, DC to develop content standards for Adult Basic Education.

Why Are We Doing The CONSABE Project? National Surveys by the General Accounting Office found that Adult Basic Education programs lack a clear statement of the knowledge and skills that adults need to possess. Local reviews of ABE revealed that there is no uniform guide for what adults should know and be able to do after completing an ABE program.

CONSABE Second Synthesis of Draft Content Standards for Adult Basic Education

Equipped For the Future (EFF)	Three Life Roles	
1.0 Parent/ Family Member	2.0 Citizen	3.0 Worker
Domain Specific Knowledge & Skill	Domain Specific Knowledge & Skill	Domain Specific Knowledge & Skill
1.1 Parenting Activities 1.2 Caregiving 1.3 Health 1.4 Community Resources 1.5 Housing & Transportation 1.6 Behavioral Management	2.1 Consumer Economics 2.2 Citizenship Activities & Voting 2.3 Civic Participation 2.4 Community Resources 2.5 Law 2.6 Behavioral Management	3.1 Labor Market Information 3.2 Workplace Culture 3.3 Education/Training 3.4 Needs & Opportunities 3.5 Job Finding & Holding 3.6 Behavioral Management
4.0 Generative Knowledge Across Life Roles and Four Purposes		
4.1 Facts, Concepts, Procedures, Rules & Principles of Basic Physical, Social & Life Sciences; World & U. S. History & Geography; U. S. Government at Federal, State, & Local Levels Literary Thought; Art and Mathematics 4.2 Language: Functional Knowledge of 15,000 Vocabulary Words & Their Derivatives		
5.0 Generative Skills for Independent Action, Decision Making and Lifelong Learning		
5.1 Thinking About Goals; Managing and Monitoring Learning 5.2 Scientific Reasoning: Empirical & Conceptual Evidence vs Personal Experience, Beliefs & Faith 5.3 Thinking: Analogical Reasoning: A is to B as C is to D Logical Reasoning: Assume Premises & Deduce Conclusions Analysis & Synthesis: Classification, Structural, Temporal		
6.0 Generative Skills for Accessing & Voicing Information		
6.1 Computeracy: Keyboarding; Word Processing; Internet 6.2 Numeracy: Comprehension, Computation, & Communication 6.3 Literacy: Reading & Writing Comprehension & Production 6.4 Oracy: Listening & Speaking Comprehension & Production 6.5 Social & Interpersonal Interacting & Cooperation		

How Is the CONSABE Project Working to Develop Draft Content Standards for ABE?

Over 350 adults have been involved in a multi-pronged approach that includes: grassroots participation by adult students, business leaders, teachers in ABE, administrators, and other stakeholders. These community members have participated in focus groups, adult students have participated in writing contests, surveys of citizens have been completed, and a review of related projects that have developed content standards for ABE has been completed.

What Do the First Draft Content Standards Look Like?

The first draft of the new content standards are shown in the accompanying figure. The draft standards include content for three Life Roles: Parent/Family Member; Citizen; and Worker.There are also three cross-cutting content areas that are made-up of generative skills for accessing and voicing information (area 6.0), generative skills for taking independent action, decision making, & lifelong learning (area 5.0), and generative knowledge that cuts across the three life roles.

What Happens Next?

The first *draft* of content standards is just the beginning. Work is underway to *further develop and validate* the draft content standards and to implement a variety of activities to reform the Adult Basic Education program to make it more attractive, meaningful and useful to adult students and to make it more accountable to the public at large.

Want More Information?

Contact Paul Erickson at the CWELL Action Research Center, telephone (619) 265-3452 or write to him at the CWELL ARC, Mid-City Continuing Education Center, 5348 University Avenue, San Diego, CA 92105. email: perickso@mail.sdsu.edu

A project of the San Diego Consortium for Workforce Education and Lifelong Learning (CWELL)

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CONSABE:
Content Standards for Adult Basic Education

Voices From the Community

Introduction

The National Adult Literacy Act of 1991 established the National Institute for Literacy (NIFL) to provide a national focal point for adult literacy education. All of the NIFL's activities are intended to accelerate progress toward National Education Goal 6, which states :

> By the year 2000, every adult American will be literate and possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

In September of 1995, the General Accounting Office released a report entitled *Adult Education: Measuring Program Results Has Been Challenging (GAO/HEHS-95-153).* This report was based on extensive interviews with federal and state adult education officials, national experts in adult education, reviews of major legislation and official documents, studies of the national program in adult education, and visits to adult education programs. Intensive reviews of adult education in California, Connecticut, and Iowa were conducted to obtain a geographically diverse sample of adult literacy education program information.

The results of the GAO study of the federally and state-sponsored adult literacy education system indicated that progress toward the achievement of Goal 6 has been difficult to assess because "...program objectives have not been clearly defined and questions exist about the validity and appropriateness of student assessments and the usefulness of nationally reported data on results (p.23)." The report went on to state that, "Several experts and program officials told us that the State Grant Program lacks a coherent vision of the skills and knowledge adults need to be considered literate. Similarly, some state officials said that they would like the federal government to further specify the types of results expected from state adult education programs (p. 23)."

The National Institute for Literacy (NIFL)
"Equipped for the Future (EFF)" Program

Taking cognizance of the need for sound information about the knowledge and skills that adults need to be considered literate, as called for in Education Goal 6 and noted by the General Accounting Office, the NIFL, working with the National Education Goals Panel, conducted a two-year research project aimed at developing a functional definition of Goal 6 that can guide the improvement of literacy services as well as the measurement of success. As a part of this activity, the NIFL sent out 6000 copies of an open letter to adult literacy programs across the United States that asked adults to provide guidance in two areas taken from the statement of National Education Goal 6. The letter provided stem questions that adults were to complete *in their own words.* The stems were:

> *"In my community, competing in the global community means...*
> *To me, having the skills and knowledge to compete in the global economy means...*
> *To me, exercising the rights and responsibilities of citizenship means...*
> *To exercise the rights and responsibilities of citizenship you have to be able to...*

Some 1500 narrative replies were received from adult learners in 149 adult programs in 34 states. In June of 1995, the NIFL issued a report of the results of the survey entitled: "*Equipped for the Future: A Customer-Driven Vision for Adult Literacy and Life-Long Learning.*" Given the narrative nature of the written responses, the NIFL research team had to distill the individually worded responses into a more limited set of categories that they thought captured the essence of the responses. Based on their analysis, the NIFL researchers induced *four major purposes* served by literacy as adults behave in *three main life roles*: parent/family member, citizen, and worker. Figure 1 summarizes these categories.

Figure 1. NIFL Framework of Four Purposes for Literacy In Three Life Roles.

	Three Adult Life Roles		
	Parent/Family Member	Citizen	Worker
Four Purposes Served By Literacy			
Literacy for Access and Orientation	**CONTENT STANDARDS**		
Literacy As Voice	"...indicate knowledge and skills-the ways of thinking, working, communicating, reasoning and investigating, and the most enduring ideas, concepts, issues, dilemmas and knowledge essential to the discipline-that should be taught and learned in school. They help develop the work and learning habits essential to success in the world outside school: the ability to study well, think logically, draw inferences, support assertions with evidence, and apply what is known to a new situation." (Shirley Malcolm (1993, November) *Promises to Keep*. Report to the National Education Goals Panel)		
Literacy for Independent Action			
Literacy as A Bridge to the Future (Foundation For Lifelong Learning)			

The four purposes that adult students believe literacy and education will help them achieve, as induced by the NIFL are:

1. *Literacy for Access and Orientation*. This includes all the ways adults see literacy helping them to locate themselves in the world. In some cases this is an actual physical or geographic location - reading maps and signs so they can find out how to get to a particular place. As one adult learner said, "Say you have to go somewhere that you have never been before and you have to read directions or take directions, if you are illiterate you can't do that." Another student said, "Literacy is the ability to read something and get the information you need to be able to act on it." According to the NIFL, this category of *literacy for access and orientation* also includes the range of prose, document and quantitative tasks that are assessed in the National Adult Literacy Survey.

2. *Literacy as Voice*. In the letters the NIFL received, many students wrote about being able to communicate to others what they think or feel, including the ability to use written and oral language effectively in interpersonal and social situations. Literacy as voice includes expressing oneself and being heard. As one student said, "I have to be able to criticize the government policy and community policy through my voice." The NIFL report surmises that, "It is this sense of the power of words to make a difference in the world that links *literacy as voice* with self-esteem and a sense of self worth."

3. *Literacy as a Vehicle For Independent Action*. Repeatedly, adult literacy students wrote about the importance of literacy for helping people make decisions for themselves and to act independently, without others having to read or write for them. One student

wrote, "Being literate to me means being able to read, write, function in the work place, local and abroad. Making critical decisions, being able to weigh pro and cons, being able to give positive feedback, being able to deal with people on every level." Still another wrote, "Literacy means to me having the power to make your own decisions for your self. When you have the knowledge of knowing how to read and write, you can take control of your own business. No one else can take control of your business, but you"

4. *Literacy as a Bridge to the Future*. The fourth fundamental purpose of literacy that NIFL induced from adult literacy student's writings was called *literacy as a bridge to the future*. This captured statements about the fear of not being able to keep up with changes in the world through the ability to pursue further education and learning. One student wrote, "Times are hard and getting harder; education is the way to go, the road to go down. Without it you would be nowhere, your road will be long but not leading anywhere." The notion of "lifelong learning" that is expressed in National Education Goal 6 was expressed by another student, "For me, having the skills and knowledge to compete in a global economy means learning new skills and being able to change and be willing to be retrained."

The *Equipped for the Future* report makes clear that the NIFL is interested in using the four purposes as more than mere rhetorical devices for exhorting adult literacy educators to think seriously about the need for changes in their programs. The report presents the four purposes as a new vision, a new conceptual framework for adult literacy education and poses several questions based on the four purposes:

> (1) "If we accept these four fundamental purposes as a touchstone for program quality, how does it change how we teach? "
>
> (2) "How would the ways in which we address these four purposes change as we move from programs addressing one population or one context [i.e., family, community, workplace] to another?"
>
> (3) "Does this framework of four purposes enable us to maintain a sense of unity to the field, while supporting the development of programs appropriate to different contexts, including the workplace, the community and the family?"
>
> (4) "Does this framework of four purposes help us to identify key values and key requirements for organizational excellence in adult literacy and basic skills education programs?"
>
> (5) "How does this framework help us link adult literacy and basic skills education with work already going on to develop skills standards for specific occupations? Should it lead to clearly articulated content standards for the various contexts relevant to family, citizenship and work? How does it fit with current efforts to develop content standards for ABE math? Does it enrich these efforts or pull them off track?"
>
> (6) "How does this framework change how we think about -- and measure -- learner progress and success?"

As noted later on, the present project, along with seven other projects across the nation, is concerned primarily with question number 5, how the framework of four purposes can be used in determining content standards for adult basic education.

Limitations to the NIFL Study. In the report on *Equipped for the Future*, the NIFL researchers noted that the study had some important methodological shortcomings.

Threats to Generalizability. Though some 6,000 letters were mailed out to adult literacy programs by the NIFL, only 1500 responses were obtained from 149 programs, a 25 percent response rate if each adult letter is counted as one reply to each of the 6,000 requests (which they weren't), or a less than 3 percent response rate if the 149 programs that replied are considered as a sample from the 6,000 requests for responses. In recognizing that the limited number of replies potentially limits the generalizabilty of the results to the thousands of literacy programs and millions of adult learners in the nation, the NIFL researchers noted that "Since participation was wholly self-generated in response to the process described above, we can make no claims about how representative the writings we received are of the entire range of adult learners. We don't know why programs chose to participate or not to participate. We made no effort to control the number of responses from any one program. Some sent two or three. Some, sent dozens of responses." The latter factor means that some few programs may have heavily biased the data base.

Threats to Validity. A second major methodological problem encountered by the NIFL researchers concerns the *reliability* and *validity* of the four purposes for literacy that were identified in the research. While extensive, subjective coding of responses was performed, limitations in resources meant that data were not available on the reliability of the coding scheme. That is, no inter-rater reliability's were obtained and no cross-validation, using independent, separate coding teams was conducted to determine how replicable the research findings were. This means that in the EFF study, it is not clear to what extent the four purposes accurately and reliably captured the statements by the "customers" or "clients," or instead expressed the beliefs and attitudes of the researchers.

NIFL's Adult Learning System Reform and Improvement Planning Grant Program

In 1995, NIFL initiated a program of research to further validate the three life roles and four purposes given in Figure 1 as a useful framework for adult literacy education. The Federal Register for July 12, 1995, pp. 35949-35950, announced a call for proposals by NIFL for research to use the framework of Figure 1 to launch a collaborative, grassroots process of system reform that could address the problems identified by the General Accounting Office (GAO) in its review of federally and state funded adult literacy programs. One problem that the GAO identified was *the lack of content standards* for programs, "...the State Grant Program lacks a coherent vision of the skills and knowledge adults need to be considered literate." The NIFL Reform Planning Grants permitted localities to tryout the framework of four purposes in an effort to develop a coherent vision of what the content standards should be for one or more of the three life roles in some aspect of adult literacy education, such as Adult Basic Education or Adult Secondary Education, or a particular content area such as English as a Second Language or mathematics. Additionally, projects were to use the framework of Figure 1 to develop a strategic plan for bringing reform to the existing local system if the plan was selected as one of three or four projects to be funded by NIFL in follow-up activities.

The San Diego CONSABE Project

In response to the NIFL's request for proposals announced in the Federal Register, the San Diego Community College District, Continuing Education Division (SDCCD/CE), acting as lead agency for the San Diego Consortium for Workforce Education and Lifelong Learning (CWELL), submitted a proposal to join with the National Institute for Literacy (NIFL) in

its initiative to improve the delivery system for adult literacy and basic skills instruction in the United States. The CONSABE project (pronounced "con sabe" as in Spanish "con" meaning "with" and "saber" meaning "knowledge") has focused on the development of draft content standards for adult basic education (ABE). Previous study by the CWELL indicated there was very little by way of a common set of content standards for ABE across the many service providers in the local area (jails; prisons; adult high schools; volunteer, library-based tutoring services; the community colleges). The goals of the CONSABE one year planning project were to (1) develop *draft* content standards for ABE and (2) develop a Long Range Plan that could lead to the reform of the ABE delivery system in the San Diego area, and serve as a model for other regions to engage in such reform.

The development of content standards for any level of education, including Adult Basic Education, is essentially a social, political process. No entirely technical means exist to establish what people should know and be able to do to meet their life requirements. Rather, members of a society, a community or a neighborhood must come together to discuss, debate and render judgments about what the purpose of education is and what should be taught in an educational program. The present report describes the socially-based methodology and outcomes for the development of draft content standards for Adult Basic Education in the CONSABE project.

Approach

In the Request for Proposals, the NIFL defined key terms to be used in the reform projects. Those used in the CONSABE project and most relevant to the present report are:

> "Literacy" is an individual's ability to read, write, and speak in English, and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one's goals and develop one's knowledge and potential (as stated in the National Literacy Act of 1991).
>
> "Adult Literacy System," or "system," means all individuals, programs, and organizations that are involved, directly and indirectly, in the delivery of literacy and basic skills services to adults. This includes, but is not limited to, people and groups involved in literacy policy making, research and development, technical assistance, and service delivery.
>
> "Constituencies" are state or local programs or agencies that are part of the applicant's service delivery system.
>
> "Stakeholders" are individuals, organizations, and institutions that are not part of the applicant's service delivery system but that have a stake in literacy.
>
> "Adult Roles" mean the following three major arenas of adult life and the obligations that pertain to each: parent/family member, citizen, worker.

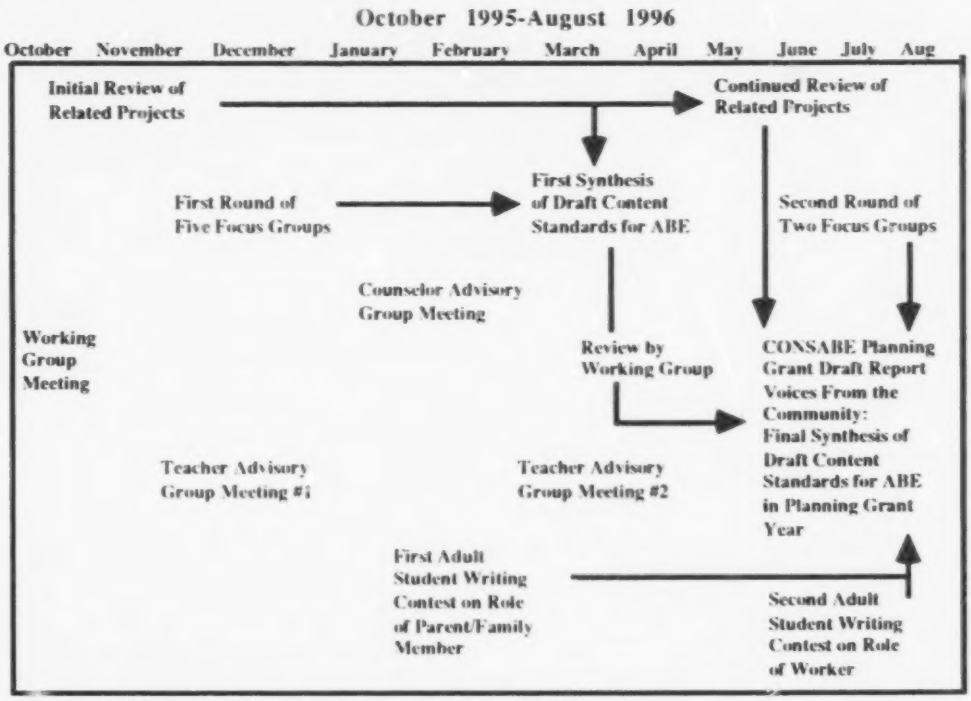
"Purposes for Literacy," based on NIFL's survey of adult learners, mean the following four general purposes that literacy serves in helping adults fulfill their roles:

- o Providing access to information so adults can orient themselves in the world.
- o Enabling adults to give voice to their ideas and have an impact on the world around them.
- o Enabling adults to make decisions and act independently, without needing to rely on others.
- o Building a bridge to the future by laying a foundation for continued learning, so adults can keep up with the world as it changes.

"Content Standards" are specific descriptions of the knowledge and skills that adults should learn and be taught.

In the NIFL *Equipped for the Future* report, the three life roles and four purposes for adult literacy education given in Figure 1 were identified. In the CONSABE project, the task was to "flesh out" the matrix of Figure 1, to determine what the responsibilities of adults are in fulfilling the three life roles, and what they should know and be able to do to meet those responsibilities. This information was then used to develop the draft content standards for use in Adult Basic Education programs. Figure 2 shows the timeline and activities for producing draft content standards for Adult Basic Education in the planning year of the CONSABE project.

Figure 2. Timeline and activities for producing draft content standards for Adult Basic Education in the planning year of the CONSABE project.


October 1995-August 1996
October
November
December
January
February
March
April
May
June
July
Aug
Initial Review of Related Projects
Continued Review of Related Projects
First Round of Five Focus Groups
First Synthesis of Draft Content Standards for ABE
Second Round of Two Focus Groups
Counselor Advisory Group Meeting
Working Group Meeting
Review by Working Group
CONSABE Planning Grant Draft Report Voices From the Community: Final Synthesis of Draft Content Standards for ABE in Planning Grant Year
Teacher Advisory Group Meeting #1
Teacher Advisory Group Meeting #2
First Adult Student Writing Contest on Role of Parent/Family Member
Second Adult Student Writing Contest on Role of Worker

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There were two major sources of information in the CONSABE project:

(1) *Review of Related Projects*. The NIFL Request for Proposals required that reform projects "draw on knowledge of and establish linkages with already existing standards or curriculum frameworks from K-12 and school-to-work, and occupational skills standards, including SCANS, Dictionary of Occupational Titles (DOT), National Council of Teachers of Mathematics (NCTM)." Therefore, the CONSABE project conducted a review of literature that documented other past and on-going attempts to develop content standards for adult literacy education, for citizenship, parenting, and for working in contemporary workplaces.

The review of past and on-going content standards projects related to the CONSABE project is presented first in this report. This will provide a perspective for the reader on what other projects to develop content standards have produced, to establish a context for better understanding the draft content standards presented in the remainder of the report.

(2) Voices from the Community. The primary data for the CONSABE project came from several grassroots, community sources: three advisory groups, seven focus groups, and two adult students' writing projects. Figure 2 shows the timeline and major community groups and their meetings that were involved in the production of the draft content standards during the planning grant year from October 1, 1995 through the end of July, 1996.

The CONSABE Advisory Groups. To develop draft content standards, a grassroots, consensus building approach was followed. Constituencies, stakeholders, and adult students served on an 18-member *Working Group* that provided overall guidance and consultation to the project, and served to bridge between the CONSABE project and the broader adult literacy education community. The Working Group members are listed at the front of this report. The Working Group met three times during the year of the project to review progress, provide advice and set directions. In addition to the Working Group, an informal *Teacher's Advisory Group* met twice and an informal *Counselor's Advisory Group* met once to discuss and make suggestions for the CONSABE research.

Focus Groups. Altogether, 69 adults participated in focus groups for the CONSABE project. Seven groups were conducted, each with a different set of constituencies, stakeholders, and adult learners engaged in it. These groups provided community-based data from which the draft content standards were induced.

Adult Students' Writing Projects. Key constituencies for the NIFL reform project are the adult learners, the "customers" of adult literacy education. In addition to serving in three focus groups made-up entirely of adult students, adult students from the four CWELL Action Research Center continuing education sites were invited to participate in two writing contests. They were given the opportunity to voice their beliefs about the knowledge and skills needed for adults to fulfill their roles of parent/family members and workers. This report includes data from more than 140 responses written by adult students.

In addition to the meetings and activities shown in Figure 2, CONSABE project staff held numerous meetings throughout the planning grant year with Adult Basic Education students, administrators, teachers, and interested stakeholders and received comments related to the CONSABE work. These many other formal and informal meetings with one, two or several community members at a time are not shown in Figure 2. Yet they, too, contributed to the development of the draft content standards presented in this report.

Review of Related Projects

Five major projects to develop knowledge and skill standards for adults in Adult Basic Education, Adult Secondary Education, and occupational fields were reviewed. These included the

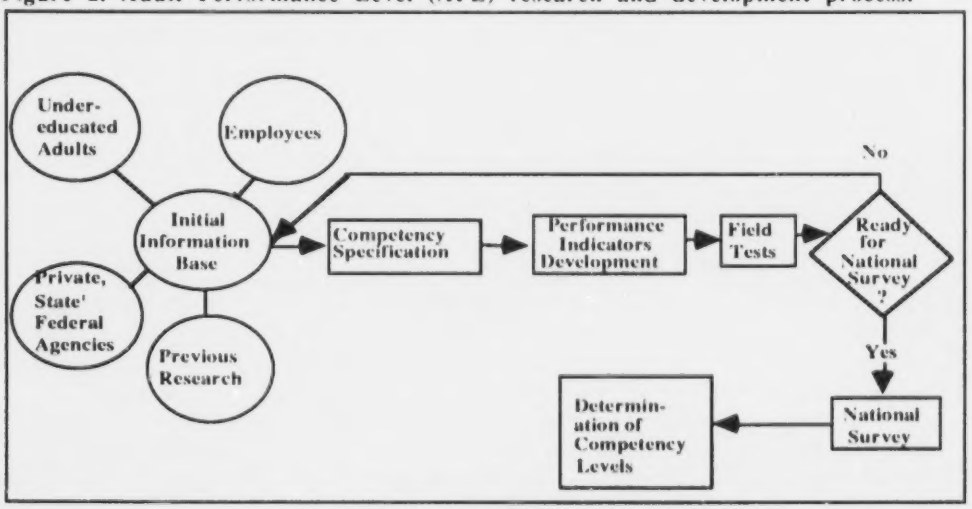
(1) APL-Adult Performance Level study,
(2) CASAS-Comprehensive Adult Student Assessment System,
(3) SCANS-Secretary of Labor's Commission on Achieving Necessary Skills ,
(4) O*NET- electronic version of the Dictionary of Occupational Titles, and
(5) GED-General Educational Development, high school equivalency tests.

Projects concerned with standards for K-12 and other adult contexts in the areas of civics (citizenship) and mathematics will not be reviewed here because they are the focus of other NIFL content standards projects .

(1). APL-The Adult Performance Level Study

In the early 1970's, the U. S. Office of Education (USOE), Adult Education Unit sponsored the Adult Performance Level (APL) study to determine the skills and knowledge that adults need to meet the basic requirements of adult living (*APL Revisited: Its Uses and Adaptation in States*. U. S. Department of Education, The National Institute of Education, September 1980). The APL project included a number of activities outlined in the flow chart of Figure 2 (Source: *Adult Functional Competency: A Report to the Office of Education Dissemination Review Panel*, Washington, DC: U. S. Office of Education, undated but circa March 25, 1975).

Figure 2. Adult Performance Level (APL) research and development process.



Initial Information Base. The basic literacy requirements of adult living were identified by: (1) reviewing behavioral and social science research to categorize the needs of undereducated and under employed adults; (2) surveying state and Federal agencies and foundations to identify characteristics that distinguished successful from unsuccessful adults; (3) conducting a series of regional conferences on adult needs to which adult educators, representatives from the private sector, and persons from state and Federal agencies were invited; and (4) interviewing undereducated and under employed adults. The

project staff arrived at the concept of functional literacy that included the five knowledge and four basic skills areas identified in Figure 3. The range of knowledge and skills included ultimately led the researchers to drop the term "functional literacy" in favor of "functional competency".

The APL General Knowledge Areas that were identified in the first report of the project, "*The Adult Performance Level Study*, Division of Extension, The University of Texas at Austin, January, 1973", included the following:

> "*Consumer Economics*. The adult will know how to manage a family economy, and will have an awareness of sound purchasing practices.
>
> *Community Resources*. The adult will have an understanding of community resources, and will know how to contact and make use of those resource organizations appropriate to his needs.
>
> *Government and Law*. The adult will know the purpose of government and law in a society and will have an understanding of governmental functions, agencies, and regulations which define his rights, and obligations, as a member of society.
>
> *Health*. The adult will know the basic requirements for maintaining personal and family safety, and will have an awareness of the procedures for maintaining good health and correcting health problems.
>
> *Occupational Knowledge*. The adult will be aware of the means by which he can enhance his ability in an economic and occupational environment.
>
> *Transportation*. The adult will have an understanding of transportation systems, and will be able to discern and use the mode of transportation appropriate to his needs." (p. 8)

The six General Knowledge Areas were crossed with the seven Basic Skills shown in Figure 3. In discussing how the Basic Skills interact with the six General Knowledge Areas, the report states that,

> "In order to be successful in our society, an adult must achieve a minimum level of competency (performance) within each of these areas. This project attempted to identify specific knowledge, abilities, and skills that define the minimum level of performance within each area. No specific knowledge, skill, or ability within any one area will distinguish the successful from the unsuccessful minimally performing adult. Each area is interrelated with the other areas. The knowledge, skills, and abilities that an adult possesses within a specific area overlap with knowledge, skills, and abilities in other areas. One of the most important characteristics of the successful performing adult is his ability to relate knowledge, skills, and abilities associated with one area with those of another." (p.8)

Interestingly, though the APL study called attention to the many overlapping knowledge and skill areas, and even asserts that one of the most important of the adult cognitive characteristics is the ability to relate knowledge and skills across the six areas, *there was no attempt to show how these knowledge and skill areas overlap and no attempt to assess how well adults could reason about relationships among these different areas*. This is a point that

will be returned to later on in the discussion of the development of the CONSABE content standards.

Figure 3. The Adult Performance Level (APL) Functional Competence Matrix.

	Knowledge Areas					
Skills	Consumer Economics	Community Resources	Government and Law	Health	Occupational Knowledge	Transportation
Reading	Specific competencies were identified for each of the cells in the matrix. These competencies became the basis for the development of the APL test of functional competency and later the development of curricula for competency-based education programs. The widely used Comprehensive Adult Student Assessment System (CASAS) was developed based on the APL approach.					
Writing						
Speaking						
Listening						
Computation						
Problem Solving						
Interpersonal Relations						

Competency Specification & National Testing. The APL project went on to identify 274 specific tasks summed over the six knowledge areas that adults should be able to perform. Test items were developed for samples of these tasks, items were field tested in several rounds with adult literacy education students, welfare program participants, and inmates in correctional institutions. Revised tests were given to a nationally representative sample of adults. Then the APL researchers related performance on the tests to criterion variables of occupational prestige, weekly income, and level of education (i.e., years of school completed).

Determination of Competency Levels. Based on this research, the APL project divided the adult population into three competency levels. It reported that some 19.7 percent, about one-fifth, of adults (over 20 million) were in the lowest level of competence. These were adults whose mastery of competency objectives were associated with (1) inadequate income - poverty level or less, (2) inadequate education - eight years of school or less, and (3) low job status - unemployed or unskilled occupation. (*Adult Functional Competency: A Report to the Office of Education Dissemination Review Panel*, Washington, DC: U. S. Office of Education, undated but circa March 25, 1975, p. 41)

Criticism of the Adult Performance Level Study. In September of 1980, the National Institute of Education in the U. S. Department of Education published a report entitled *APL Revisited: Its Uses and Adaptation in States*. (Washington, DC: U. S. Government Printing Office Number 0-629-751/6003). The report documented the widespread influence of the APL project in bringing about competency-based adult education in several states. Additionally, the report contained a review of criticisms of the APL and the measurement instruments the project produced. It included a critique of the scientific basis of the APL study in which it was concluded that, "As a scientific inquiry, the APL study was very weak. Even if we put aside doubts about the existence of a general construct of "adult competence," the much publicized finding that 20 percent of American adults are "functionally incompetent" on the basis of the design, conduct and reporting of the APL study is altogether untenable." (p. 69) Among other things, it was noted that the criteria for establishing the scores below which adults were considered "functionally incompetent," were essentially arbitrary, and the procedures for doing this were never explained to the satisfaction of psychometricians by the APL researchers. (p.63)

Among the specific criticisms of the APL study, and other approaches to "life-skills" curricula was, "The endless proliferation of goals and objectives to which this approach leads" (p. 62), such as the 274 specific tasks the APL project identified for the six knowledge and seven skill domains. Also of concern in such approaches to curriculum development was, "The requirement that the curriculum designer decide in advance which types of people are "good citizens, good parents or true believers." (p.62) This was viewed as violating "The emphasis of the progressive movement on the individual learner" (p. 62), a position that is today advocated in the "learner-centered, participatory" approach to adult literacy education (e.g., Fingeret, A. & Jurmo, P. (Eds.). (1989). *Participatory literacy education. New Directions for Continuing Education, No. 42*. San Francisco, CA: Jossey-Bass).

Finally, criticisms of the methods the APL project used to develop and interpret competency test items included both criticisms of many of the specific items for their vagueness and inappropriateness for many adults, and the results of a factor analysis which identified only three basic dimensions, which were interpreted as the traditional three R's, not the seven skills or six knowledge areas given in the matrix of Figure 3 (pp. 64-65). (It should be noted that in the final report of 1975, the APL study dropped the Transportation area as a separate domain of knowledge).

Despite these conceptual, procedural, and measurement shortcomings, the APL project was widely advocated by the U. S. Department of Education, and Federal funding was used to encourage adoption of the APL approach in adult basic education programs. Today, the most widely-used adaptation of the APL project is found in the Comprehensive Adult Student Assessment System (CASAS), which has been nationally validated and approved by the National Diffusion Network in the U. S. Department of Education.

(2) CASAS- The Comprehensive Adult Student Assessment System

As a major part of its competency-based adult education initiative, the California Department of Education, Adult Education Unit initiated in 1980 the California Adult Student Assessment System (CASAS). (Judy Alamprese & Others (1987, March). *CBAE Evaluation Study Report: Investing in Change: Competency-Based Adult Education in California*. San Diego, CA: Comprehensive Adult Student Assessment System).

Modeled after the Adult Performance Level (APL) project, CASAS was designed to enable adult educators to develop and evaluate a life skills curriculum linking instruction and assessment. Today, CASAS has participants in 49 states, and the name has been changed to the Comprehensive Adult Student Assessment System (CASAS). The CASAS testing and curriculum referencing system is used in adult education programs for continuation high schools, juvenile court schools, correctional institutions, Job Training Partnership Act, citizenship, special needs students, alternative high school completion, welfare, family literacy, employability, workplace literacy, English as a Second Language, General Educational Development (GED) preparation and adult basic education (CASAS (1995, June). *National Summer Institute 1995: Assessment in an Era of Change*. San Diego, CA: CASAS).

Illustrating the point made earlier about the potential for an "endless proliferation" of competencies that the CBAE approach can encourage, the 1994 list of competencies that CASAS has developed now includes 317, including ten for developmentally delayed persons. This is a 15 percent increase over the original 274 competencies identified by the APL study in 1973. Figure 4 lists the eight major headings of the life skills competencies that CASAS had identified as of 1994, along with the sub-competencies for each major

Figure 4. CASAS Major Competencies List

1. Basic Communication
   - Communicate in interpersonal interactions
   - Communicate regarding personal information
2. Consumer Economics
   - Use weights, measures, measurement scales, and money
   - Apply principles of comparison shopping in the selection of goods and services
   - Understand methods and procedures used to purchase goods and services
   - Understand methods and procedures to obtain housing and related services
   - Apply principles of budgeting in the management of money
   - Understand consumer protection measures
   - Use banking and financial services in the community
   - Understand methods and procedures for the purchase and maintenance of an automobile and interpret driving regulations
3. Community Resources
   - Use the telephone and telephone book
   - Understand how to locate and use different types of transportation and interpret related travel information
   - Understand concepts of time and weather
   - Use postal services
   - Use community agencies and services
   - Use leisure time resources and facilities
   - Understand aspects of society and culture
4. Health
   - Understand how to access and utilize the health care system
   - Understand medical and dental forms and related information
   - Understand how to select and use medications
   - Understand basic health and safety procedures
   - Understand basic principles of health maintenance
5. Employment
   - Understand basic principles of getting a job
   - Understand wages, benefits, and concepts of employee organizations
   - Understand work-related safety standards and procedures
   - Understand concepts and materials related to job performance and training
   - Effectively utilize common workplace technology and systems
   - Communicate effectively in the workplace
5. Employment (cont.)
   - Effectively manage workplace resources
   - Demonstrate effectiveness in working with other people
   - Understand how social, organizational and technological systems work, and operate effectively within them
6. Government and Law
   - Understand voting and the political process
   - Understand historical and geographical information
   - Understand an individual's legal rights and responsibilities and procedures for obtaining legal advice
   - Understand information about taxes
   - Understand governmental activities
   - Understand civic responsibilities and activities
   - Understand environmental and science-related issues
   - Understand concepts of economics
7. Computation
   - Demonstrate pre-computation skills
   - Compute using whole numbers
   - Compute using decimal fractions
   - Compute using fractions
   - Compute with percents, rate, ratio,and proportion
   - Use expressions, equations, and formulas
   - Demonstrate measurement skills
   - Interpret data from graphs and compute averages
   - Use statistics and probability
   - Use estimation and mental arithmetic
8. Learning to Learn
   - Identify or practice effective organizational and time management skills in accomplishing goals
   - Demonstrate ability to use thinking skills
   - Demonstrate ability to use problem solving skills
   - Demonstrate study skills
   - Understand aspects of and approaches to effective personal management
9. Domestic Skills (primarily for developmentally disadvantaged)
   - Perform self-care skills
   - Perform home-care skills

area. Not shown here are the sub-sub-competencies for each of the competencies identified in Figure 4 which, if shown, would bring the total of competencies to 317. The CASAS test item bank now includes more than 5,000 items for assessing the 317 competencies (CASAS (1995, June). *National Summer Institute 1995: Assessment in an Era of Change*. San Diego, CA: CASAS).

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Criticism of the CASAS Project. Like the APL project, the CASAS project has come in for its share of criticism. Some of these criticisms concern the validity of the CASAS competency tests, some the usefulness of the instructional guidance provided by the tests.

Validity Criticisms. As noted above, the APL researchers stated, "The knowledge, skills, and abilities that an adult possesses within a specific area overlap with knowledge, skills, and abilities in other areas." The CASAS manual for item writing (1983,p.1) makes a similar point about the overlap of skills and knowledge within a given test item:

> "In a competency-based instructional program, assessment should reflect life skills as described by clearly defined competency statements. A functional transfer, multiple-choice context is used [in CASAS tests] because it measures a student's ability to transfer learning from the classroom to real-life situations (as simulated by pencil and paper tests).
>
> A word of caution must, however, be noted. The use of the functional transfer context *generally tests the use of two or more skills*. Therefore, this context is not appropriate in itself for diagnosing weaknesses in specific skills since it is difficult to determine which skill was performed incorrectly. (italics added)
>
> The following example of the functional transfer context can illustrate this point. Suppose an item requires the examinee to balance a checkbook. If the examinee answers the items incorrectly, which one (or more) of the following problems is the cause? Is it the examinee's inability to read or comprehend the verbal material? Is it the examinee's lack of familiarity with the use of a checkbook or lack of familiarity with the specific type used as the illustration for the item? Or is it the examinee's inability to compute the correct answer? The specific skill diagnosis cannot be determined."

This overlap of basic skills (reading, writing, speaking, listening) and content knowledge areas illustrates one of the difficulties in determining the validity of assessments that use complex, real world tasks, (including the APL and the recent National Assessment of Adult Literacy Survey - NALS). The problem is that it is not clear what is being measured, and that is the defining feature of validity. That is, a valid test is one which measures what it is supposed to measure - and only that! But as the CASAS test manual makes clear, when one has administered a CASAS test item, it is not clear just what has been measured, and this is especially important for determining what one should teach when tasks are not performed correctly.

Problems With Instructional Decision Making. Possibly because of the unknown nature of just what competence is involved in performing the various CASAS test items (and similar complex task oriented tests), teachers often do not know exactly what to teach even if they know what "level" of instruction to assign students. In a study of the implementation of the CASAS assessment and other CBAE methods in California, "...the majority of instructors commented in interviews that keeping records of individual student competency attainment -- particularly in ESL classes -- was 'not helpful,' "not attainable,' or 'not feasible." (p. 22) Adult Basic Education instructors "...frequently expressed the concern that a competency-based life skills approach, at least as defined by existing competency lists, was not appropriate for their students." (p. 40) (It should be noted, though, that some ABE students did report that at least some of the "life skills" education was useful.) (p. 40) (Judy Alamprese & Others (1987, March). *CBAE Evaluation Study Report: Investing in Change: Competency-Based Adult Education in California.* San Diego, CA: Comprehensive Adult Student Assessment System).

Though teachers may be provided with lists of the competencies that their students did not perform well on in a CASAS test, it has been noted that in many cases the tests do not contain enough items that measure the same competency to provide a reliable estimate of a person's competence in the given area. (Gregg Jackson, Chapter 3 in T. Sticht (1990, January). *Testing and Assessment in Adult Basic Education and English as a Second Language Programs*. Washington, DC: U. S. Department of Education, Division of Adult Education and Literacy.)

Criticism of the CASAS in the GAO report included comments by ESL teachers who were dissatisfied with the CASAS test as a measure of how well adult education students learned to communicate in English. Some employment training staff said that the CASAS test did not give them sufficiently specific information about their clients or focused too much on li[illegible] skills. (General Accounting Office (1995, September).*Adult Education: Measuring Program Results Has Been Challenging (GAO/HEHS-95-153).*

Testing From a Statistical Perspective vs Teaching From a Developmental Perspective. The CASAS item development manual states that,

> "Although the functional transfer context generally tests the use of two or more skills, the items presently included in the CASAS Item Bank have been analyzed in such a way as to determine their level of difficulty. That is, using a common scale of difficulty, each item has been assigned a difficulty number, comparing that item to all other items in the Bank. By using this difficulty scale, a determination can be made as to whether the item is appropriate at a given instructional level."

The assignment of a difficulty level to the CASAS items based simply on how well the norming population does on the item is a statistical method for creating a scale of items from easy to very difficult. However, it is not based on a theoretical or conceptual understanding of a progressive increase in language competence, or in the growth of understanding in particular bodies of knowledge, nor on the increase in the automaticity of listening, reading or computation in Adult Basic Education or English as a Second Language, nor any other developmental understanding of learning. Rather, the increasing difficulty levels are based strictly on how well people performed on the different tasks. Some tasks were not accomplished correctly by very many people in the norming group, so they were scaled as difficult items. Though why they are difficult is not known, as in the checkbook example above.

Instead of teaching from the point of view of a "scale of difficulty," discussions with teachers suggest that they tend to teach from a developmental perspective. The age old homilies of teaching this way are that we try to "go from the known to the unknown," "go from the familiar to the unfamiliar," "go from the simple to the complex," "go from the concrete to the abstract." Other developmental perspectives are expressed as, "build on students' entering knowledge" or "build on students' strengths not their deficiencies."

In the CASAS CBAE approach to instruction, the CASAS tests are used to identify the competencies that adult students do not have, or in which they are very weak, and then references are made to commercial or other available materials that teach those particular competencies. However, from the developmental perspective the questions addressed by the CASAS manual about why students could not do certain items, would be turned into questions about what items they could do and what competence that meant they possessed that teachers could build on.

There appears to be a need for a developmental, theory-based means of assessment of competence in adult literacy education that bridges between the "bottom-up," growth-oriented, developmental perspective from which teachers work, and the "top-down," outcomes-based, statistical difficulty approach from which standardized, normed, test developers work. Building this bridge to the future poses a challenge for the NIFL reform program.

(3). *SCANS: The Secretary of Labor's Commission on Achieving Necessary Skills*

On February 20, 1990, then Secretary of Labor Elizabeth Dole formed the Secretary's Commission on Achieving Necessary Skills -SCANS. The SCANS was asked to examine the skills and knowledge demands of the workplace and to define the skills needed for employment and propose acceptable levels of proficiency for work.

The SCANS pursued its mission by conducting numerous interviews with business owners, public employers, unions, and workers and supervisors in shops, plants and stores. It established six panels to examine jobs from manufacturing to government employment. Researchers were commissioned to conduct lengthy interviews with workers in a wide range of jobs to find out what tasks they perform and the skills and knowledge they needed to perform those tasks.

In 1991, the SCANS issued its first report (SCANS (1991, June) *What Work Requires of Schools*. Washington, DC: U. S. Department of Labor). In this report, the SCANS presented a summary of the workplace know-how that students graduating from high school and adults already in the workforce should possess to work in "high performance" workplaces (Figure 5). The latter were defined as workplaces where people work as much or more as members of teams as they do individuals, they work on a diversity of products and services that may change rapidly instead of a limited number of fixed tasks as in the traditional assembly line of manufacturing, they have to deal directly with customers, and participate more and more in the decision making process of the workplace, rather than simply responding to orders from managers.

Figure 5. SCANS Workplace Competencies and Foundation Skills

SCANS Workplace Competencies and Skills

WORKPLACE COMPETENCIES-Effective workers can productively use:

- o Resources - allocating time, money, materials, space, and staff
- o Interpersonal Skills - working on teams, teaching others, serving customers, leading, negotiating, and working well with people from culturally diverse backgrounds
- o Information - acquiring and evaluating data, organizing and maintaining files, interpreting and communicating, and using computers to process information
- o Systems - understanding social, organizational, and technological systems, monitoring and correcting performance, and designing or improving systems
- o Technology - selecting equipment and tools, applying technology to specific tasks, and maintaining and troubleshooting technologies

FOUNDATION SKILLS

- o Basic Skills - reading, writing, arithmetic and mathematics, speaking and listening
- o Thinking Skills - thinking creatively, making decisions, solving problems, seeing things in the mind's eye, knowing how to learn, and reasoning
- o Personal Qualities - individual responsibility, self-esteem, sociability, self-management, and integrity

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As Figure 5 indicates, the SCANS content standards for preparing people for work are divided into two major groups, the Foundation Skills and the Five Competencies. The Foundation Skills emphasize the traditional three R's and oral language skills, and also include a number of Thinking Skills that reflect the new, more cognitively demanding world of high performance work. The Foundation Skills also include what some would not call "skills," but rather character, personality, or dispositional traits. They are Personal Qualities that are imperative for working with people in social institutions. Presumably, this is what schools have traditionally referred to as "socialization" in contrast to academic, cognitive development.

The Five Competencies indicate the areas of work performance to which the Foundation Skills are applied, much as the APL matrix of Figure 3 showed how the seven skills (reading, writing, etc) were applied to the six knowledge areas (consumer economics, health, etc.). In a manner similar to that of the APL study, in which it was noted that the seven skills and six knowledge domains are interrelated, the SCANS report went on to acknowledge the inter relatedness of the Foundation Skills and the Five Competencies. It stated that:

> "We believe, after examining the findings of cognitive science, that the most effective way of teaching skills is "in context." ...Real know-how - foundation and competencies - cannot be taught in isolation; students need practice in the application of these skills. The foundation is best learned in the context of the competencies that it supports. Reading and mathematics become less abstract and more concrete when they are embedded in one or more of the competencies... When skills are taught in the context of the competencies, students will learn the skill more rapidly and will be more likely to apply it in real situations. (SCANS. (1991, June) *What Work Requires of Schools*. Washington, DC: U. S. Department of Labor, pp 19-20)

The SCANS project has had a wide-spread influence on school-to-work, adult job training and adult literacy education programs. Many such programs, including the San Diego Community College District, Division of Continuing Education, have "infused SCANS" into their curricula. Also, the CASAS project has added "learning to learn" competencies and some other competencies to better map onto and assess the SCANS know-how.

Criticism of the SCANS. One criticism of the SCANS work is that it did not actually propose acceptable levels of proficiency in the Five Competencies and three Foundation Skills for qualifying for high performance workplaces. Consequently, schools and employers do not know the depth to which the Five Competencies and three Foundation Skills should be developed to qualify people for entry level, high performance work.

A second criticism is that the Five Competencies and three Foundation Skills were not cross-validated, that is, used by a different analysis team to analyze jobs that were different from those originally used to induce the competencies and skills to determine the generalizability of the competencies and skills across a wider range of jobs, and the reliability with which they could be used in job analysis.

Both the problems of setting levels and cross validating the SCANS know-how are being addressed by the Departments of Labor and Education in ongoing work by the American College Testing (ACT) organization. (ACT. (1995, November). *The National Job Analysis Study: A Project to Identify Cross-Occupational Skills Related to High-Performance Workplaces*. Iowa City, IA: ACT).

*(4). O*NET: The Occupational Information Network Content Model*

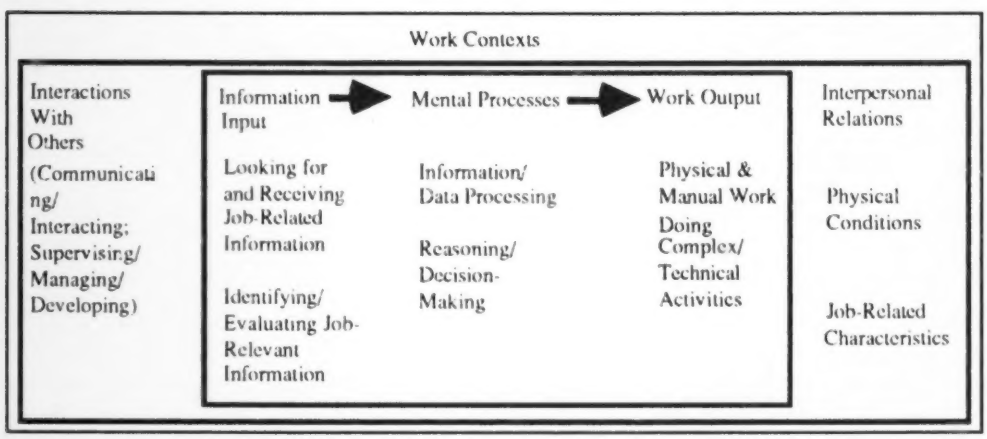
During the Great Depression of the 1930's, the *Dictionary of Occupational Titles (DOT)* was developed by the U. S. Department of Labor as a tool to help the newly established public employment service place workers in jobs. Since that time, the uses of the DOT have expanded to include counseling of high school students for work, providing employers information about comparability of jobs, providing labor market information for civic planning, and so forth.

In 1990, the Department of Labor formed the Advisory Panel for the Dictionary of Occupational Titles (APDOT) to review the DOT and make recommendations for making it a more useful tool for the twenty-first century. In 1993, the APDOT published its report (Advisory Panel for the Dictionary of Occupational Titles (1993, May). *The new DOT: A Database of Occupational Titles for the Twenty-First Century*. Washington, DC: U. S. Department of Labor, Employment and Training Administration).

The APDOT report called for the creation of a future-oriented, interactive, electronic data base for labor market information that will eventually replace the printed volumes of the Dictionary of Occupational Titles (DOT). Called the O*NET, the new electronic database will include information about work contexts, work content and outcomes (e.g., services rendered), labor market context (e.g., occupational outlook data), and worker attributes. It is the latter that are the concern here, because they describe the knowledge, skills, and attitudes required by the thousands of occupations in the United States. Knowledge of the O*NET worker attributes can inform the understanding of what adult basic education students should know and be able to do to fulfill their role as a worker.

*O*NET Worker Attributes*. In developing the information database on Generalized Work Activities, one of the categories of Worker Attributes (see below), the design team followed the model of work contexts and worker information processing and performance shown in Figure 6 (source: unpublished briefing document, O*NET project; note: this work is currently in progress in the Department of Labor and so the information given here is subject to change and should not be construed as an official position of the U. S. Department of Labor.) The model also accommodates as Mental Processes the other Worker Attributes : Aptitudes, Knowledge, Work Styles, and Skills.

Figure 6. O*NET Information Processing Model for Developing the Generalized Work Activities Taxonomy



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Altogether, the O*NET has identified 190 dimensions of worker attributes within the following five categories. The number at the end of each category shows how many specific variables are included in the general category.

> *Abilities:* An enduring attribute that influences performance on a variety of tasks, for instance, cognitive abilities such as oral and written comprehension and expression, mathematical reasoning, inductive and deductive reasoning, and remembering, ordering and selective attention. (52 Abilities in O*NET)
>
> *Generalized Work Activities:* A grouping of similar actions that, when put together, form a work function that is performed in many different jobs. For example, getting information to do the job; identifying information received by making estimates or categorizations, recognizing differences or similarities, or sensing changes in circumstances or events; estimating sizes, distances, and quantities; analyzing data or information to identify underlying principles, reasons, or facts by breaking down information or data into separate parts; resolving conflicts and negotiating with others; coaching and developing others, etc. (42 Generalized Work Activities in O*NET)
>
> *Knowledges:* Sets of facts and principles needed to address problems in particular parts of a job. This may include academic subjects such as physical, life, and social sciences; and professional subjects such as business, marketing, education and training, etc. (33 Knowledges in O*NET)
>
> *Work Styles:* Behavioral attributes that work requires, including such things as persistence, dependability, analytical thinking, creativity, self-control, etc. (17 Work Styles in O*NET)
>
> *Skills:* Generalized [cognitive] procedures for acquiring or applying knowledge in various domains. (46 Skills in O*NET)

Perhaps of most relevance to the present project are the 46 Skills identified by O*NET and listed in Figure 7. At the end of each item, a judgment of the relationship of the item to one of the four *Equipped for the Future* purposes is given. For instance, item 1, Reading Comprehension, is related to purpose number 1 - Access to information. Item 4, Speaking, is related to purpose number 2 - Voice. Arguably, items 5 and 6, Mathematics and Science, might be assigned all four purpose codes. However, here they have been assigned to purpose number 3 - decision making and independent action - to illustrate their role as knowledge (declarative and procedural) domains that are used in reasoning and thinking for making decisions and taking some action. Items 8 and 9 involve learning and so they have been assigned to purpose number 4 - bridge to the future (lifelong learning).

*Comments on the O*NET.* An impression one can form of the O*NET project is that there is somewhat of a tendency toward analytical overkill. It is questionable whether one really needs 190 dimensions to characterize the Worker Attributes required for work in the United States. It seems doubtful, for instance, that there is really any useful reason, and indeed any operational method, to try to distinguish the *Abilities* of Oral and Written Comprehension and Expression, from the *Skills* of Reading Comprehension, Active Listening, Speaking and Writing. The same may be said for many of the other thinking and reasoning "abilities," "skills," or "styles," too.

Figure 7. Forty Six Workplace Skills Identified by the O*NET Project

1. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents. (1)
2. **Active Listening:** Listening to what other people are saying and asking questions as appropriate. (1)
3. **Writing:** Communicating effectively with others in writing as indicated by the needs of the audience. (2)
4. **Speaking:** Talking to others to effectively convey information. (2)
5. **Mathematics:** Using mathematics to solve problems. (3)
6. **Science:** Using scientific methods to solve problems. (3)
7. **Critical Thinking:** Using logic and analysis to identify the strengths and weaknesses of different approaches. (3,4)
8. **Active Learning:** Working with new material or information to grasp its implications. (4)
9. **Learning Strategies:** Using multiple approaches when learning or teaching new things. (4)
10. **Monitoring:** Assessing how well one is doing when learning or doing something. (4)
11. **Social Perceptiveness:** Being aware of others' reactions and understanding why they react the way they do. (1,2)
12. **Coordination:** Adjusting actions in relation to others' actions. (1), (3)
13. **Persuasion:** Persuading others to approach things differently. (2)
14. **Negotiation:** Bringing others together and trying to reconcile differences. (2)
15. **Instructing:** Teaching others how to do something. (2), (4)
16. **Service Orientation:** Actively looking for ways to help people. (3)
17. **Problem Identification:** Identifying the nature of problems. (3)
18. **Information Gathering:** Knowing how to find information and identifying essential information. (1)
19. **Information Organization:** Finding ways to structure or classify multiple pieces of information. (1,4)
20. **Synthesis/Reorganization:** Reorganizing information to get a better approach to problems/tasks. (4)
21. **Idea Generation:** Generating a number of different approaches to problems. (3)
22. **Idea Evaluation:** Evaluating the likely success of an idea in reaction to the demands of the situation. (3)
23. **Implementation Planning:** Developing approaches for implementing an idea. (3)
24. **Solution Appraisal:** Observing and evaluating the outcomes of a problem solution to identify lessons learned or redirect efforts. (3),(4)
25. **Operations Analysis:** Analyzing needs and product requirements to create a design. (1)
26. **Technology Design:** Generating or adapting equipment and technology to serve user needs. (n/a)
27. **Equipment Selection:** Determining the kind of tools and equipment needed to do a job. (1)
28. **Installation:** Installing equipment, machines, wiring, or programs to meet specifications. (3)
29. **Programming:** Writing computer programs for various purposes. (2)
30. **Testing:** Conducting tests to determine whether equipment, software, or procedures are operating as expected. (n/a)
31. **Operation Monitoring:** Watching gauges, dials, or other indicators to make sure a machine is working properly. (n/a)
32. **Operation and Control:** Controlling operations of equipment or systems. (n/a)
33. **Product Inspection:** Inspecting and evaluating the quality of products. (3)
34. **Equipment Maintenance:** Performing routine maintenance and determining when and what kind of maintenance is needed. (n/a)
35. **Troubleshooting:** Determining what is causing an operating error and deciding what to do about it. (3)
36. **Repairing:** Repairing machines or systems using the needed tools. (n/a)
37. **Visioning:** Developing an image of how a system should work under ideal conditions. (1,2)
38. **Systems Perceptions:** Determining when important changes have occurred in a system or are likely to occur. (1)
39. **Identification of Downstream Consequences:** Determining the long-term outcomes of a change in operations. (1)
40. **Identification of Key Causes:** Identifying the things that must be changed to achieve a goal. (1)
41. **Judgment and Decision Making:** Weighing the relative costs and benefits of a potential action. (1,3)
42. **Systems Evaluation:** Looking at many indicators of system performance, taking into account their accuracy. (n/a)
43. **Time Management:** Managing one's own time and the time of others. (1,2,3,4)
44. **Management of Financial Resources:** Determining how money will be spent to get the work done, and accounting for these expenditures. (1,2,3,4)
45. **Management of Material Resources:** Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work. (1,2,3,4)
46. **Management of Personnel Resources:** Motivating, developing, and directing people as they work, identifying the best people for the job. (1,2,3,4)

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Another aspect of the O*NET analysis is that, like the APL and CASAS projects, there is no attempt to understand and clarify the overlap and interactions among Worker Attributes. For instance, how do Reading and Listening comprehension relate? In empirical studies, these information processing activities intercorrelate highly among adults. What are the implications of these empirical findings for the O*NET (or APL or CASAS, for that matter) when educators are interested in understanding how to efficiently design instructional programs that develop student's literacy skills for work?

Part of the reason for the lack of interactive viewpoints among the Worker Attribute scales may be that while the O*NET team working on Generalized Work Activities developed an information processing model that guided their work, the other teams did not make use of the same model in a modified form to guide their work. It is as though the other attributes are not part of the same mental model that the Generalized Work Activities team followed. Indeed, the model of Figure 2, above, is incomplete and misleading in that it contains no knowledge base in the mental processes with which the information processing and reasoning skills operate, and there is no indication of the active information search and locate activities that the mental processes initiate in a purposeful manner. Rather, the arrowhead from the Information Input goes only one way, as though the mental processes only react to stimulus input that happens along. But this ignores the purposeful , constructive nature of the mental processes in setting a goal, searching out input information, processing it by mixing it with prior knowledge, performing an output and monitoring the latter as feedback for further activity. It is this purposeful, dynamic view of the person that seems to be missing in all these attempts to come up with "real world" content standards for adult education.

(5). GED-General Educational Development High School Equivalency Tests

Perhaps the project with the longest history of providing content standards for adult literacy education is the General Educational Development testing project of the American Council on Education. The GED tests permit adults who leave the K-12 school system before completing high school to show that they have academic skills comparable to those of a high school graduate. Based on their test performance, California adults who are residents and who pass at the required level set by the State may be awarded a High School Equivalency Certificate. Over 35,000 credentials were awarded in California in 1992, and from 1971 through 1992 over 240,000 high school equivalency credentials were awarded in California (American Council on Education (1993, April). *Tests of General Educational Development: 1992 Statistical Report.* Washington, DC: GED Testing Service).

Figure 8 shows the five content areas that are assessed on the GED tests. The number of questions for each test and the time allowed for completing the test are given to suggest the depth of assessment in each area. Total testing time exceeds 7 1/2 hours. With the exception of the Essay part of the Writing test, all the tests are multiple choice items with five alternatives. The Essay test requires around 200 words and is holistically scored on a 6 point scale, with 1 being the lowest and 6 the highest quality work.

Performance on all of the GED tests requires the ability to read, comprehend, and analyze written material. The tests measure knowledge of concepts in the social studies, sciences, and interpretation of literature and arts, and they require adults to apply their knowledge and skills to solving problems in the content areas, including mathematics. People who perform poorly on the GED also perform poorly on the National Adult Literacy Survey (NALS) and those who perform well on the GED tend to perform well on the NALS. A general factor underlying both the GED and the NALS has been labeled as "...the ability to understand and use written information and to analyze information embedded in printed materials." It accounts for a 60 percent overlap in performance on the two tests. (Baldwin,

J., Kirsch, I., Rock, D., & Yamamoto, K. (1995, December). *The Literacy Proficiencies of GED Examinees: Results From the GED-NALS Comparison Study*. Washington, DC: GED Testing Service of the American Council on Education., p. 79).

Figure 8. The Five Tests of General Educational Development (GED)

GED Tests		Number of Questions	Time (minutes)
1. Writing:	Part 1: Sentence structure, useage, spelling, punctuation, capitalization	55	75
	Part 2: Essay Composition	--	45
2. Social Studies:	History, geography, economics, political science, behavioral science	64	85
3. Science:	Life sciences (biology), physical sciences (earth sciences, physics, chemistry	66	95
4. Literature and the Arts:	Interpreting popular, classical & commentary literature and writing	45	65
5. Mathematics:	Arithmetic computation, algebra, geometry, ratio, proportion, problem solving, measurement, number relationships, data analysis	56	90

Criticisms of the GED. A major criticism of the GED tests over the years is that they are too "academic" and irrelevant for adults who are not planning to go on to college. Adults, it is argued, do not need to know all that science and literature to get by as parents, citizens, and workers. Also, the tests do not assess oral language skills which are of concern to immigrants nor interpersonal skills which are of importance in workplaces. Nor do they assess adult's "real world" competence at work or in the community participating in civic affairs, children's clubs, adult social organizations and the like.

In response to these sorts of criticisms, the American Council on Education has developed the National External Diploma Program, modeled after the New York State External High School Diploma Program (Nickse, R. (1980). *Assessing Life-Skills Competence: The New York State External High School Diploma Program*. Belmont, CA: Pitman Learning, Inc.) The National External Diploma Program assesses competencies over time, at a pace set by the adult and at locations in the home, the workplace or other places selected by the adult in addition to the assessment center. The External Diploma program assesses oral and written communication, following directions, learning to learn, computation and problem solving, familiarity with technological tools such as computers and calculators, the ability to manipulate, analyze, synthesize and apply data in context, and various interpersonal and teamwork competencies.

Altogether, 65 competencies are assessed that are embedded in a series of simulations of realistic tasks, such as finding a job or planning a vacation. The adult demonstrates a competency of his or her own choosing by verifying occupational or special skills, such as art or home management, through an employer evaluation or a performance demonstration in front of a community expert. Upon the successful completion of tasks assessing all competencies, the adult receives a high school diploma. (American Council on Education (undated, circa 1990). *National External Diploma Program: Assessment Procedures and Sample Assessment Materials*. Washington, DC: The Center for Adult Learning and Educational Credentials External Diploma Program.)

Discussion of the Five Projects

The review of the five projects that have engaged in one way or another with the specification of adult "competencies" or "attributes" for various purposes has revealed several issues.

(1) *The "proliferation" issue*. There is a tendency for these projects to develop very long lists of "competencies," as in the case of the APL and CASAS projects or "attributes" as in the case of the O*NET project. In these three projects, the number of adult knowledge and skill areas, sub-areas, and sub-sub areas of content ranged from 190 for the O*NET project to 317 for the CASAS. Generally, in such "outcome-based" methodologies for specifying what people should know and be able to do, there is no rationale given for how many sub-areas should be identified, and this can get very specific, as in the 5,900 test items the CASAS has for assessing the 317 "competencies." In this case, each item can be seen as a specific "competency." In contrast, the SCANS and GED projects specify a few, very broad categories of knowledge and skill.

(2) *The "overlap" issue*. The "overlap" issue deals with the question of the interactions and similarities among the many "competencies" identified in the various projects. Factor analysis revealed only three factors in the APL study, not 270 competencies. As noted above, a general factor underlying both the GED and the National Adult Literacy Survey has been labeled as "...the ability to understand and use written information and to analyze information embedded in printed materials." It accounts for a 60 percent overlap in performance on the two tests. The Tests of Applied Literacy Skills (TALS), a commercial version of the NALS has been found in one study to have about a 50 percent overlap with the CASAS (CASAS (1995, June). *National Summer Institute 1995: Assessment in an Era of Change*. San Diego, CA: CASAS) These findings raise the important question as to just what the competence is that actually underlies the many things that adults can be identified as being able to do.

(3) *The "levels" issue*. Across all these projects there is a concept of "levels" that suggests that people can be assessed to discover their "level" on some competency or attribute. For instance, the APL study found 20 percent of adults in the lowest "level" of functional competence. The CASAS has measurement tests that both assign a person to a general level of competence and also identifies performance on separate competencies that people may need to work on improving (though see the criticism by Greg Jackson, above). The O*NET identifies seven levels for each of the 46 skills of Figure 7. The GED has levels for each of the five parts of the test. All these projects raise the question of just what it means to say that people have "levels" of knowledge, skills, competence, or literacy.

(4) *The "developmental" issue*. While all of the projects reviewed discuss knowledge and skill outcomes, such as "competencies, " "attributes," "levels" or "high school equivalency," none of them present information on how it is that adults come to possess these outcomes. How do they get developed? Have adults who possess them at "high levels" at the age of 18 or 19 at the end of secondary school developed them in the same way that adults must who choose to develop them in adult literacy programs? What must one do to help adults move from scoring at the 200 level of a CASAS reading test to a 236 level (a growth of about three standard deviations) ? Given the relatively high intercorrelations among these various tests, will the person who moves from the 200 to the 236 level on the CASAS also show similar improvements on the NALS and the GED tests?

(5). *The "who decides what the content standards shall be" issue*. Finally, all of the foregoing projects have derived competencies based on the statements of business leaders, teachers, adult education program administrators, workers and various other stakeholders

and constituencies. But only the APL project reported listening to adult students, and even then the students' expressed wishes and desires for learning were not identified as such. As mentioned earlier, the "learner-centered, participatory" approach to adult literacy education (e.g., Fingeret, A. & Jurmo, P. (Eds.). (1989). *Participatory literacy education. New Directions for Continuing Education, No. 42*. San Francisco, CA: Jossey-Bass) argues against programs in which the curriculum designer decides in advance what people should know and be able to do to fulfill their roles as parents, citizens or workers. Rather, they argue that adults should identify what they want to learn and the teacher should help the adults find resources both within themselves and from outside sources to pursue their learning objectives.

In the NIFL/CONSABE project, a compromise approach has been followed in which adult learners do not provide the only voice about what adult students should learn, but they have the majority voice. Of the 213 adults in the CONSABE focus groups and the adult student writing contests, over 80 percent were adult students. The following section presents data obtained from the focus groups and adult student writing contests.

Voices From the Community

The Seven Focus Groups

As indicated in Figure 2, there were two rounds of focus group meetings. The first round of five meetings took place in the first quarter of the project, from October through December of 1995. Two groups were made-up entirely of adult basic education students, two included representatives from the business, government and education communities, and one consisted of graduate students from the Department of Educational Technology at the San Diego State University.

In the spring of 1996, two additional focus groups were convened, one consisted solely of teachers of Adult Basic Education and the other included only ABE adult students. None of the focus group participants received any synthesis materials or other materials to suggest what they might say. Instead, each was carefully instructed to report only what they thought adults should know and be able to do to fulfill their responsibilities in the three life roles and achieve the four purposes identified by the National Institute for Literacy.

Figure 9 shows the number of participants and their demographic make-up (total numbers for different demographic categories vary because not all participants provided all information, which was voluntary). In general, there was balanced representation by gender, diversity by ethnic group, and a wide range of ages. Adult students made-up half of all participants. Both constituent and stakeholder groups as defined by the NIFL were represented.

Focus Group Procedures. Figure 10 presents a typical agenda for six of the focus groups (a seventh, abbreviated focus group for ABE students was conducted in the classroom as part of the ABE course). In each focus group, the participants were first asked to complete a mandatory form giving their consent to having the group meetings tape recorded and for the use of their names in a final report should that be desired. No one refused to complete the consent form. Next, participants were requested to complete a voluntary demographic form that asked for the information summarized in Figure 9, and most provided the desired information.

After the initial form-filling activities, participants were given an orientation to the CONSABE Project including a review of adult basic education issues, a summary of the

NIFL *Equipped for the Future* report and an overview of the NIFL Reform project with its eight projects, including the CONSABE project.

Figure 9. CONSABE focus group demographic data.

Participants	N	Participants	N
Adult Learners	35	Ethnicity	
Stakeholders	25	American Indian/ Alaskan Native	01
Constituents	09		
Total	69	Asian/Pacific Islander	14
Gender			
Male	31	Black/Non-Hispanic	14
Female	37		
Age (years)		Hispanic	17
16-21	05		
22-30	14	White, Non-Hispanic	31
31-45	32		
45+	17		

Figure 10. Agenda for a typical focus group.

CONSABE: Content Standards for Adult Basic Education			
I.	Introduction to the focus group; complete consent and demographic forms; participants introduce themselves.		Min. 30
II.	Background and Rationale of the project		40
III.	Work sheet completion and discussion		
	A.	Parent/Family Member role	45
	B.	Citizen role	45
	C.	Worker role	45
IV.	Working lunch (combined with III)		
V.	Closing and Discussion		35

In the major part of each focus group, participants completed three forms to provide information about what they thought adults should know and be able to do to fulfill their roles as Parent/Family Member, Citizen or Worker and to accomplish the four purposes identified in the *Equipped for the Future* report. For instance, Figure11 shows a (greatly reduced) form for the role of Worker. The form was divided into two columns. One column was for participants to write down what they thought people should *know* to fulfill their role as a worker, and the second column asked participants to indicate what they thought people should be able *to do* t o fulfill their role as a worker. Participants were

further guided to provide the *know* and *to do* information for each of the four purposes that comprise the four rows of the form. So they were asked, for instance, to write down in the designated cell of the form (the cell with the X) what adults need to *know* to be able to *access information* to fulfill their role as a worker. Then they were asked to write what adults need to be able *to do* to access information in the appropriate cell (the Y cell in figure 3). They then did this for each of the remaining three purposes. After the form was filled-in, each participant was asked to discuss his or her responses.

Figure 11. Example of a CONSABE Focus Group Data Gathering Form.

Life Role: Worker

Four Purposes	Need to Know	Need to be Able to Do
Access to Information	x	y
Give Voice to Ideas		
Making Decisions & Acting Independently		
Obtain Foundation for Continued Learning		

Following the discussion of the first form, a second form was completed and discussed, and finally the third form was completed and discussed. A separate Technical Appendix contains copies of the three data collection forms. All discussions were tape recorded for transcribing as needed. A complimentary lunch was provided at each focus group meeting.

Data Analysis Procedures. The primary data for the focus groups consisted of over 1200 lines of information from the written responses on the three forms. These forms produced a large, rich corpus of qualitative statements by the various participants. Additional information came from the transcriptions of the tape recorded sessions. All of the text material from the various stages of analysis and the transcriptions of the tape recorded sessions are available on disk.

To analyze the data, a series of data analysis stages were undertaken.

Stage 1 Analysis. In the first stage of the analysis procedure, the forms from each focus group were read and the information was entered into a computer data base using Microsoft Word. In this process, the data were categorized according to the role being considered, each of the four purposes for each role, and the two *Know* and *Do* sections of the form. In these analyses, the identity of the specific focus group from which the data lines originated was maintained. For example, Figure 12 shows a sample of the comments on the Parent/Family Member data form from the first adult student focus group held on 14 December 1995.

Figure 12. Illustration of stage one data analysis for adult student focus group #1. Sample comments about what adults need to know and be able to do to fulfill their role as Parent/Family Member.

Parent/Family Member	Need to be Able to Do
Need to Know	*Make Decisions & Act Independently*
Access to Information	Learn about life from philosophy and literature books.
Reading vocabulary	For life experience is never enough alone
Learn to read write better myself	Take public transportation
To teach more about life, to set an example	Read, communicate verbally, form networks of info
To help with homework	
Giving Voice to Ideas	*Obtain Foundation for Continued Learning*
Expressing yourself	Vocabulary
Able to think up new ideas	Know people
Able to say new ideas	Take courses to understand where you can go to get information
Help kids with homework	Be able to give back by sharing what you learned
Good vocabulary and manners	Know Logic

Stage 2 Analysis. In Stage 2 of the analysis the data lines for all seven focus groups from Stage 1 were grouped together and placed into the three roles, four purposes, and Know and Do categories. This procedure lost the identity of the separate focus groups. Figure 13 presents a sample of these aggregated data for what people need to be able to do to fulfill the role of Worker.

Figure 13. Illustration of stage 2 data analysis for all groups combined. Sample comments about what adults need to be able to do to fulfill their role as Worker.

Worker	
Need to be Able to Do	*Making Decisions & Acting Independently*
Access to information	Access knowledge of the environment
Find and be able to use a "data base"	Weigh pros and cons
Create and use a network	Take initiative
Obtain information to solve a problem	Access sources for foundation in order to make decisions
Operate a computer	Separate [options] by cost, time, need, priority
Comprehend newspaper articles (job opportunities, etc.)	
Use library/Table of contents/Glossaries	*Obtain Foundation for Continued Learning*
Giving voice to Ideas	Critical listener -- critical reader motivation
Logical progression of ideas, thought. Write notes, memos, letter, forms, etc.	Use library to access learning materials
Be able to identify correct source to express self to	Find out prerequisites - if program is right
Put ideas into coherent sentences	Problem-solving skills
	Persevere

Stage 3 Analysis. In Stage 3 of the analysis procedures, the Non-numerical Unstructured Data Indexing Searching and Theorizing (Nud-IST) software program was used to code the data lines for further analysis (an explanation of the process for selecting the NUD.IST

qualitative data evaluation software is contained in the separate Technical Appendix). Prior to coding, the data were consolidated into data lines containing all of the 1,284 comments which were written on the three data collection forms filled out during the seven focus groups.

Figure 14 shows a sample of data that illustrate what the data looked like after they were coded and reported in the NUD.IST format. When a comment on the data forms was unintelligible it was verified for content by reviewing the focus group transcriptions.

Figure 14. Stage 3 Analysis: All Focus Group Data: NUD.IST Report

All Focus Groups Condensed

ON-LINE DOCUMENT: first focus sum Text units 1-1284:	Text Unit Reference
Existence of and importance of "data base" i.e., Importance of information sources.	4
How to network for information.	5
Library/Computer/ Newspaper	6
What sources are available	7
Think critically	34
How to analyze information for accuracy	67
Write ideas as well as voice them	125
Weigh pros and cons	143
How to buy a car	215
What to do with problem kids	216
How to handle kid's problems	217
Where to shop	310

ON-LINE DOCUMENT: first focus sum Text units 1-1284:	Text Unit Reference
Reference	
Distinguish the difference between each level of government	370
Register to vote	371
It all comes down to reading, weather it's a news paper or medicine bottle	577
Participate in PTA	578
Buy into company idea + public relations	716
How to follow rules or regulations	954
Read speak English	1273
To find good job need good English	1278
Get more education	1283

Figure 14 shows the types of comments which were coded and reported by the NUD.IST program. The numbers to the right of the comments in Figure 14 are the reference numbers to the text lines from the complete list of comments contained in the file: *First focus sum.* , which contained all of the focus group comments extracted from the data forms.

First Synthesis of Draft Content Standards

Examining the focus group data, the transcripts and notes from the seven focus groups, and the content standards identified by the related projects reviewed in the first of this report various higher order content categories were induced and a preliminary representation of the draft content standards for ABE was formulated as presented in Figure 15.

In this tree-structure representation of draft content standards there are six major top level nodes, one for each of the three life roles, and three for categories of information that seem to run across all three of the life roles. A seventh node was added for thoughts that did not seem to fit in the other areas in the next stage of the analysis.

Stage 5 Analysis. The Stage 5 analysis was made to determine if the consolidated focus group data from the Stage 2 analysis would fit into the 6 nodes and their subordinate categories in the hierarchical categories of the first synthesis of the draft content standards.

Using the node and subordinate category codes of Figure 15, the focus group data lines from the NUD.IST data base were studied and sorted into a category where they seemed to fit. An illustration of the results of this sorting and categorization process are given in Figure 16 for Node number 3.0: Worker. The separate Technical Appendix includes all the data.

Figure 15. Categories for the first synthesis of draft content standards.

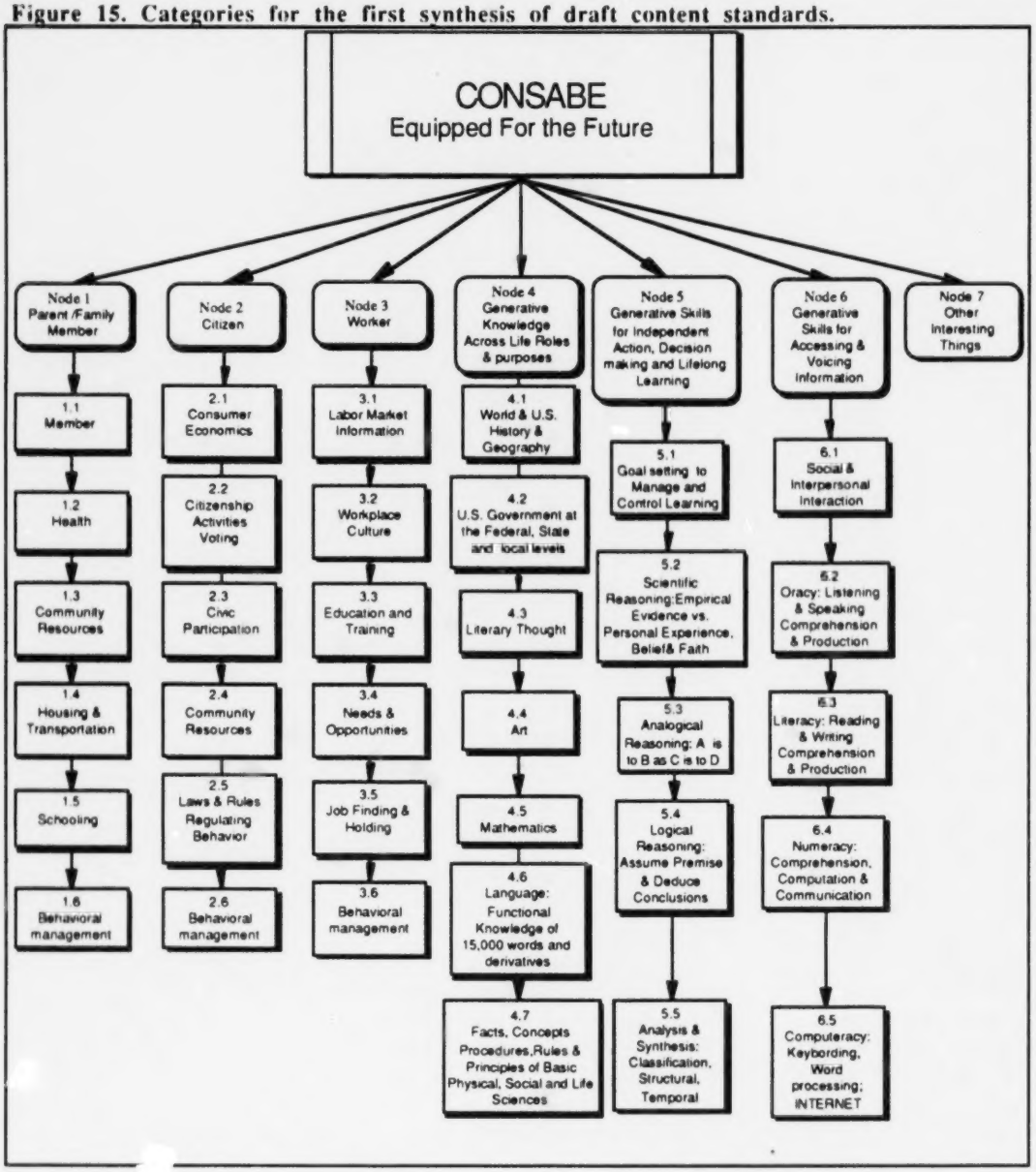
CONSABE
Equipped For the Future
Node 1 Parent /Family Member
1.1 Member
1.2 Health
1.3 Community Resources
1.4 Housing & Transportation
1.5 Schooling
1.6 Behavioral management
Node 2 Citizen
2.1 Consumer Economics
2.2 Citizenship Activities Voting
2.3 Civic Participation
2.4 Community Resources
2.5 Laws & Rules Regulating Behavior
2.6 Behavioral management
Node 3 Worker
3.1 Labor Market Information
3.2 Workplace Culture
3.3 Education and Training
3.4 Needs & Opportunities
3.5 Job Finding & Holding
3.6 Behavioral management
Node 4 Generative Knowledge Across Life Roles & purposes
4.1 World & U.S. History & Geography
4.2 U.S. Government at the Federal, State and local levels
4.3 Literary Thought
4.4 Art
4.5 Mathematics
4.6 Language: Functional Knowledge of 15,000 words and derivatives
4.7 Facts, Concepts Procedures,Rules & Principles of Basic Physical, Social and Life Sciences
Node 5 Generative Skills for Independent Action, Decision making and Lifelong Learning
5.1 Goal setting to Manage and Control Learning
5.2 Scientific Reasoning:Empirical Evidence vs. Personal Experience, Belief& Faith
5.3 Analogical Reasoning: A is to B as C is to D
5.4 Logical Reasoning: Assume Premise & Deduce Conclusions
5.5 Analysis & Synthesis: Classification, Structural, Temporal
Node 6 Generative Skills for Accessing & Voicing Information
6.1 Social & Interpersonal Interaction
6.2 Oracy: Listening & Speaking Comprehension & Production
6.3 Literacy: Reading & Writing Comprehension & Production
6.4 Numeracy: Comprehension, Computation & Communication
6.5 Computeracy: Keybording, Word processing; INTERNET
Node 7 Other Interesting Things

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Figure 16. Focus group responses concerning what an adult person should know or do in their role as a Worker sorted by the categories of Figure 9.

Life Role 3.0: Worker	*Life Role 3.4*
	Worker/ Needs and Opportunities
Life Role 3.1	Focus group comments
Worker/Labor Market Information	How to obtain information within the work environment
Focus group comments	Goals of business/worksheet
How to do an information search	Know where you fit in overall framework
How to look up info/search skills	How to communicate with persons whom you work
Understand job market	Create and use a network
Research available resources	Share both information and process of accessing with coworkers and subordinates.
Know worth in job market	Be able to make judgments about work procedures
Research available resources	Value the work ethic
How to communicate and collaborate	Read, communicate verbally, form networks of info
Promotional opportunity	Thoughts into work
How to search for the right information	Skills in working with others
	How to network
Life Role 3.2	Read, Write, Communicate, Process information and form strategies(network)
Worker/ Workplace Culture	Be a good worker
Focus group comments	Get along at work and speak read and discuss
Communicate with & appreciate diverse cultures	To write speak the language to discuss and work
Speak to people from various cultures	Talk to co-worker
Company rules and regulations manual	
That each of us has a history and culture	*Life Role 3.5*
Employer's rules, policies, expectations, mission	*Worker/Job Finding, Getting and Holding*
Read rules, time cards, pays stubs, work orders, etc.	Focus group comments
Understand hierarchy and culture of the organization	How the company functions, its' mission and employee's roles.
American culture	Category of employment
How to follow Rules or regulations	Employer's rules, policies, expectations, mission
The company rules	How to seek better employment
Regulations and company rules	How the employer will support continued learning
	How to identify and contact employers
Life Role 3.3	Terms of employment termination
Worker/Training and Education	Move from point A too point B in a manner that is beneficial to employer and self
Focus group comments	Get advice and help from employers and ABE providers
Go to school at the same time working	Rights of Employee/Benefits provided
Ways to set goals and determine what education is needed to obtain	Where to find info that is pertinent to maintaining employment (or obtaining employment)
What education programs are available	Policies & procedures of employer & how to use them to best advantage
Keep education status updated and diversified	
Read educational schedules	
Succeed at their own educational level	
Gain info via education of experience to become a better provider (taxpayer, husband, father)	
What additional skills need to obtain & where to get this training	

The results of the Stage 5 analysis revealed that it was possible to sort the focus group data into the categories of Figure 15, with no data being sorted into the Node 7 category for "Other Interesting Things." Thus it was deemed feasible to use the categories of Figure 15 for sorting the data from the student writing contests.

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The Student Writing Contests

Each year the Action Research Center of the San Diego Consortium For Workforce Education and Lifelong Learning (CWELL) conducts three writing contests for adult students in the Continuing Education Division of the San Diego Community College District. Winners of each contest receive a $25 dollar check and their essays are printed in *the Community Exchange*, the newspaper of the CWELL.

Figure 17. Announcement for CONSABE student writing contest.

Win $25 CASH!!

Announcing the CWELL
STUDENT WRITING CONTEST

What do ABE or ESL students need to know in order to fulfill their roles as parents and/or family members.

Steps to enter:

- **Write an essay on this topic.**
- **Entries must be less than 250 words, original, and by one author.**
- **Return entry to the CWELL Action Research Center by December 14th, 1995.**

Who can participate in the contest?
- **All adult students at Mid-City Center, Cesar Chavez Center, Educational Cultural Complex, and the Centre City Skills Center.**
- **Beginning ESL students are encouraged to participate (English translations accepted).**

Who will win the contest?
- **Three winners from each of the above sites.**
- **Each winner will receive site recognition and a $25 award. Winners will also be announced in the summer issue of the Community Exchange newspaper!**

What information is necessary?
- **Writing contest entry (250 words).**
- **Student name, address, and telephone number.**
- **School site where enrolled and length of time enrolled at the San Diego Community College District.**
- **Teacher's name and name of class.**

Submit entry by December 14th to:
- **CWELL Action Research Center (265-3452), c/o Mid-City Center, Room 166**
5348 University Avenue, San Diego, CA 92105

GOOD LUCK!

To obtain information about what adults should know to meet their responsibilities as parents/family members and as workers, as perceived by the immediate "customers" of adult literacy education, CONSABE sponsored two of the three writing contests for 1996. Figure 17 shows the announcement that was distributed to invite participation in the writing contest about Parent/Family Members. Altogether, over 144 entries were received for the two writing contests, from adult students in Intermediate or Advanced levels of English as a Second Language programs, adult basic education courses, and vocational skills courses.

The separate Technical Appendix includes all of the entries. Here, just samples of the categorized data from the student writings are included to illustrate the richness of the student's insights, and the deep feelings that they have about the importance of being a parent, a member of a family, and a worker.

Student Writers Voice Their Thoughts
About the Life Role of Parent/Family Member

Figure 18. Categories induced from adult student writings about the life role of parent /family members.

Love

Sustenance, love protection,moral support, faithfulness, guidance and education are most important things parents give to their sons.

ABE or ESL students must know how to unequivocally replace loneliness and isolation with values of uniqueness, love and reflectiveness.

Besides all these things, the most important role that we have as parents is to teach our children love, values, self-esteem, discipline and the courage to reach their goals even if sometimes they have mistakes.

Learning

Develop values to encourage awareness of possibilities, an active sense of curiosity, an ability to grow, develop a willingness to continually learn.

In this country it is very important for Hispanic parents to learn to speak English so that they can help their children with their homework and they can achieve good grades

Upon seeing that their parents are interested in learning, they will want to stay in school

Being a Good Example

I hope that one day my children will feel proud that I am their mother and that I have always been a good example for them

The good example that the parents set is always useful

I think the most important thing is to achieve and not to give up, to set an example for one's children

Religion and Faith

ABE and ESL students should know and value their Creator who give and sustains life eternally.

I alway hope and pray for my family to always have good health, fortune and that my father mother have longlife

I always pray for good health for him and to live along life, because he's very important to me

English Language

I also think it is important for our family to speak and understand the English language because when our children go to school we have to talk to their teacher and if the teacher is not bilingual we cannot understand what they say about how the children are doing in their studies or how to help them

When one goes to look for a job, the first thing they ask us is if we speak English

I also think that if I had learned English I would have a job with a good salary and that economically I could have helped my father more

Some 44 students responded to the writing contest question about what adults need to know and be able to do to fulfill their role as parents/family members. These students were primarily enrolled in ESL programs and their responses were filled with numerous references to the love and nurturance aspects of the family and the role of the family in inculcating moral, ethical, and religious beliefs. This was different than what was found in the focus groups comprised primarily of adult students who were native U. S. citizens.

Eleven major categories were induced from the adult student writing entries about parents/family members:

Love
Learning
Being a Good Example
Religion and Faith
English Language
Discipline
Obeying and Respecting Parents
Work Ethic
Values and Morals
Study Skills
Care for Parents and Family Members

These categories are listed in Figure 18, along with a few lines that were used to induce the categories from the students' writings.

Figure 18 (continued)

Discipline	**Values and Morals (continued)**
Continually react more positive things than negative. Do what you want and can do, not what people want you to do. Discipline is fundamental.	They must know how to seek values of establishing a democracy of individual participation, governed by two central aims: that the individual share in those social decisions which determine the quality and direction of his/her life; and that society be organized to encourage independence in men and women and provide the media for their common participation.
Besides all these things, the most important role that we have as parents is to teach our children love, values, self-esteem, discipline and the courage to reach their goals even if sometimes they have mistakes.	Besides all these things, the most important role that we have as parents is to teach our children love, values, self-esteem, discipline and the courage to reach their goals even if sometimes they have mistakes.
I want to discipline my children so they will make the right choices	
Obeying and Respecting Parents	**Study skills**
We also treat our parents with more consideration; the old people always become emotional when the condition of life changes quickly.	Second, we should encourage them to study English and help them to do something.
When I was a child my mother told me " Be a good boy and respect old people and be an honest man	My father helped me improve my education and taught my sister how to study
Now my mother is old, I have to take care of her and I always love and respect her	I need to take time to study more because my daughters always ask me a lot of things
	Finally , I will encourage my children to study harder for a brighter future and grow up with good moral values
Work Ethic	**Care for Parents and Family Members**
Take your children to school and back; Teach them in a good way; Help them to get out of their troubles at school and you must help them do their homework also	He [father] should make his family happy and take care of other family members
I work hard to earn money to help family, and sometimes I do housework, make dinner because I want my brother and sister have more time to study and do their homework	My husband and I work hard for future specially for our children; but I still take time to take care of our children because they are too small
My husband and I work hard for future specially for our children; but I still take time to take care of our children because they are too small	He should help solve family problems and take care of their family members
	The eldest son has to help me solve our family problems and take care of other family members
Values and Morals	I take care of them [parents] some time when they are sick sometime I take them to the market
Because many of our family values have been corrupted by separation, divorce, selfishness, pleasure seeking, non-commitment in relationships, domestic violence, irresponsibility in our "free world" society, ABE or ESL students must know what values are explicit to them.	Now my mother is old, I have to take care of her and I always love and respect her

Student Writers Voice Their Thoughts About the Life Role of Worker

In the second writing contest sponsored by the CONSABE Project, over 100 adult students wrote about their views on what it takes to be a responsible worker. Unfortunately, the writing contest responses were obtained too late for a full analysis for the present report, though they will be fully analyzed in the follow-up activities. However, a cursory review of the reponses suggests that while they add some new perspectives on the *specifics* of being a good worker, they do not call for any new *general* categories beyond those given in Figure 10. For this reason, the second synthesis of draft content standards includes changes based only on the student's writings about the roles of parent/family member.

Second Synthesis of Draft Content Standards

The second synthesis of draft content standards included two major changes to the first synthesis shown in Figure 15. First, changes were made to the general categories of Figure 15 under the Node 1.0 Parent/Family Member. In these changes, sub-category 1.1 Member was changed to Parenting Activities. Then it was decided to divide sub-category 1.5 Schooling into two parts. One part went into the Parenting Activities category as things parents need to be able to do to help children get ready for and succeed in school. The second part of Schooling went into the Community Resources category as an institution with which all family members should be familiar. These changes deleted Schooling as a separate general category.

In addition, sub-category 1.2 Health was changed to 1.3 and a new sub-category 1.2 Caregiving was added. These changes were based on the results of the analysis of the student writing contest on the role of Parent/Family Member in which helping with schooling was viewed as a parenting responsibility, and caregiving was repeatedly mentioned in regard to how family members should care for one another, including the idea that younger family members should care for older family members.

The second major change in the second synthesis is in the way the categories are organized for presentation. In Figure 19 the four purposes for which adults attend literacy education as identified by the National Institute for Literacy (NIFL) are thought of as cross-cutting, *generative skills*. The purposes of literacy for (1) accessing information and for (2) voicing information were used to form the cross-cutting, generative skills of Category 6.0 in Figure 19. The two NIFL purposes of literacy for (3) making decisions and acting independently, and (4) as a bridge to the future through lifelong learning were grouped together as generative skills in Category 5.0 of Figure 19.

Figure 19 is designed to overcome some of the problems that have been encountered in earlier, related projects.

The "Proliferation" Issue. In the first part of this report it was noted that one of the issues that has arisen in related projects is the proliferation of competencies. The Adult Performance Level project identified 274 "competencies," for adult basic education, the Comprehensive Adult Student Assessment System identified 317 "competencies", and the O*NET project of the Department of Labor has identified 190 dimensions of knowledge, skills, and attitudes just for the role of worker.

In contrast, the Secretary of Labor's Commission on Achieving Necessary Skills (SCANS) identified only three broad categories of "Foundation Skills" and five broad categories of "Workplace Competencies." Similarly, the General Education Development (GED) project identified only five broad areas of content for testing on the GED high school equivalency tests.

As indicated in Figure 19, the CONSABE project has taken a position at a moderate range on the proliferation scale and identified 6 very broad categories of content comprised of 28 sub-categories of content that, while broad enough to permit flexibility at the curriculum development level of activity, are not as broad as the top six categories and so they offer a better focus for the content to be taught in ABE.

33

The "Overlap" Issue. A second issue identified in the earlier review of related projects was the fact that both the Adult Performance Level and Comprehensive Adult Student Assessment System noted that there was much "overlap" or "inter relatedness" among the various competency domains. Yet these projects did not deal in any way with this overlap. Nor does the tree structure representation of information in Figure 15 of this report depict the overlap.

Figure 19. CONSABE Second Synthesis of Draft Content Standards for Adult Basic Education

Equipped For the Future (EFF)	Three Life Roles	
1.0 Parent/ Family Member	2.0 Citizen	3.0 Worker
Domain Specific Knowledge & Skill	Domain Specific Knowledge & Skill	Domain Specific Knowledge & Skill
1.1 Parenting Activities	2.1 Consumer Economics	3.1 Labor Market Information
1.2 Caregiving	2.2 Citizenship Activities & Voting	3.2 Workplace Culture
1.3 Health	2.3 Civic Participation	3.3 Education/Training
1.4 Community Resources	2.4 Community Resources	3.4 Needs & Opportunities
1.5 Housing & Transportation	2.5 Law	3.5 Job Finding & Holding
1.6 Behavioral Management	2.6 Behavioral Management	3.6 Behavioral Management
4.0 Generative Knowledge Across Life Roles and Four Purposes		
4.1 Facts, Concepts, Procedures, Rules & Principles of Basic Physical, Social & Life Sciences; World & U. S. History & Geography; U. S. Government at Federal, State, & Local Levels Literary Thought; Art and Mathematics		
4.2 Language: Functional Knowledge of 15,000 Vocabulary Words & Their Derivatives		
5.0 Generative Skills for Independent Action, Decision Making and Lifelong Learning		
5.1 Thinking About Goals; Managing and Monitoring Learning		
5.2 Scientific Reasoning: Empirical & Conceptual Evidence vs Personal Experience, Beliefs & Faith		
5.3 Thinking: Analogical Reasoning: A is to B as C is to D Logical Reasoning: Assume Premises & Deduce Conclusions Analysis & Synthesis: Classification, Structural, Temporal		
6.0 Generative Skills for Accessing & Voicing Information		
6.1 Computeracy: Keyboarding; Word Processing; Internet		
6.2 Numeracy: Comprehension, Computation, & Communication		
6.3 Literacy: Reading & Writing Comprehension & Production		
6.4 Oracy: Listening & Speaking Comprehension & Production		
6.5 Social & Interpersonal Interacting & Cooperation		

Figure 19 addresses the issue of overlap by identifying three domains of generative knowledge and skills that cut across the three domains of more specific content about the three life roles. These are called *generative* because it is hypothesized that these three cross-cutting domains are actually used to learn and create (i.e., generate) new knowledge and skill, including the knowledge and skill that is learned in the three life roles. Admittedly, this is a very complex issue and the attempt to represent a concept of overlap and generativity in a simple figure is bound to leave something to be desired. Nonetheless, that is what has been attempted in Figure 19 and that is why it looks the way it does.

A Small -Scale Validation Study

The draft content standards of Figure 19 are a blend of data from the earlier review of related projects, the focus group and writing contest data, and discussions with adult teachers, counselors, administrators, individual adult students and other stakeholders on an informal basis.

Figure 20. CONSABE Adult Basic Education Survey

Purpose of the Survey

The California State Department of Education makes available free adult basic education programs for adults who have not completed their high school diplomas or whose reading, writing, math, or English language skills are too low to qualify them for vocational or job training programs or for work.

This survey is part of an effort to find out what the general public thinks adults need to know and what they should be able to do to satisfactorily meet their responsibilities in three life roles: parents/family member, citizen and worker. This information can be used to help develop basic education programs for adults.

Instructions

The survey presents a list of knowledge and skills that might be of importance for adults to have to meet their responsibilities as parents/family members, citizens or workers. Please read each statement carefully and then circle the number that you think shows how important the knowledge/skill area is for adults to be able to meet their responsibilities in the three life roles. Then do the same for the statements that are called "Generative" knowledge and skills. These knowledge and skills are thought to cut across all three life roles. If you think the knowledge/skill is of low importance, circle the 1, if you think it is of medium or moderate importance, circle the 2, if you think the skill is of high importance, circle the 3.

Background Information (Note: All information is confidential! Your name is not required.)

1. Gender (check one): Male_____ Female_____

2. Age Range (check one): 16-21_____ 22-30_____ 31-45_____ Over 45_____

3. Race/Ethnic Group (check one): (note: these are categories used by the U. S. Department of Education)

American Indian/Alaskan Native_____ Asian/Pacific Islander_____

Black, Non-Hispanic_____ Hispanic_____White, non Hispanic_____

4. Years of Education (check one): less than 12_____12_____13-15_____16 or more_____

5. Your present job: _____ _____
(note: if you are not employed write "unemployed," if you are a full-time student write "student")

To get an idea of how useful the categories of Figure 19 are for communicating with citizens about the various topics and for serving as content standards for adult basic

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education, a small-scale study was conducted as part of a summer course at the San Diego State University. The course was concerned with Workforce Education and Lifelong Learning. In this regard, graduate students were informed about the CONSABE project. As a class assignment, they were asked to obtain the responses of ten people to the survey described in Figure 20.

Altogether, students surveyed over 130 people. To keep data processing time down, data for a non-systematic sample of 100 of the adults surveyed in the graduate course are presented below in Table 1. The table shows that 93 out of a hundred of those surveyed thought that Parenting (taking care of children) was highly important for adults to know and be able to do to meet their responsibilities as Parents/Family Members.

Results: Life Roles. The results of the survey for the limited 100 person sample are quite clear. The two life roles that those surveyed thought had sub-categories of most importance were Parent/Family Member and Worker. Only one sub-category in the Parent/Family Member category had less than half the respondents rate it of high importance. That was the sub-category of Transportation. This seems to confirm that it is appropriate to group Housing and Transportation together as in Figure 19.

Four of the six sub-categories in the life role of Citizen had fewer than 50 percent of the respondents rate them as highly important. Only Law and Behavioral Management had 50 percent or more respondents rate them as sub-categories of Citizen that were highly important.

In all three life roles, the respondents consistently (75+%) rated the sub-category of Behavioral Management as highly important. This sub-category refers to the ways people interact with others in their three life roles, how they control their anger, show their love and respect, tolerate differences among peoples, etc. This is clearly related to the Generative Skill for Accessing and Voicing Information category of Social & Interpersonal Interacting and Cooperation that 67% of respondents rated as highly important.

Results: The Four NIFL Purposes as Generative Knowledge and Skills. In the Generative Knowledge areas, it is clear that the people sampled thought that the subjects typically taught and tested on the GED high school equivalency are not of the highest importance for adults to know. None of those academic subjects had more than 39 of the 100 respondents rate them of high importance. This is consistent with the criticism that many people think that the GED tests focus too much on unessential, academic knowledge, as indicated in the earlier CONSABE report of related projects.

Interestingly, the only sub-category of Generative Knowledge that did receive a sizable percentage of highly important ratings (66%) was Language, i.e., the idea that adults should have a functional vocabulary of 15,000 frequently used vocabulary words. This is consistent with the very high proportion of respondents who rated literacy (83%) and oracy (72%) as of high importance for adults to learn as a cross-cutting, generative skill for accessing and voicing information.

Figure 19 shows that the four purposes identified by the National Institute for Literacy (NIFL) can be thought of as cross-cutting, *generative skills*. The purposes of literacy for accessing information and literacy for voicing information were used to form the cross-cutting, generative skills of Category 6.0 in Figure 19. With the exception of Numeracy (computing & communicating with math) the remaining five sub-categories in Figure 19 were all rated by 50 percent or more of the respondents as of high importance for adults to know.

Table 1. Data for 100 Survey Respondents to CONSABE Adult Basic Education Survey.

Data for Three Life Roles

Life Role: Parent/Family Member

	Importance (circle one) Lo	Med	Hi
Parenting (taking care of children)	1 02%	2 05%	3 93%
Caregiving (taking care of other family members, e.g., elderly parents)	1 03	2 20	3 77
Health (preventive & curative health care)	1 02	2 24	3 74
Community Resources (library; schools; stores; etc)	1 06	2 39	3 55
Transportation (DMV; Public Transport)	1 17	2 55	3 28
Housing (finding & providing shelter)	1 08	2 30	3 62
Behavioral Management (controlling anger; avoiding drugs; tolerating other's points of view; etc.)	1 03	2 22	3 75

Life Role: Citizen

Consumer Economics (comparison shopping; avoid scams & ripoffs; etc.)	1 08	2 50	3 42
Citizenship Activities & Voting (participating in political activities; registering to vote, etc.)	1 10	2 42	3 48
Civic Participation (get involved in community activities; write to government representatives; etc.)	1 27	2 51	3 22

Life Role: Citizen (continued)

	Importance Lo	Med	Hi
Community Resources (court house; legal aid; banks; etc.)	1 28%	2 43%	3 29%
Law (understand own & other's rights & responsibilities in public places; etc.)	1 08	2 42	3 50
Behavioral Management (respecting rights of others;being courteous; etc.)	1 06	2 18	3 76

Life Role: Worker

Labor Market Information (Understand job market; know worth in job market; etc)	1 10	2 40	3 50
Workplace Culture (Communicate with & respect diverse cultures; understand hierarchy and culture of the organization etc.)	1 11	2 32	3 57
Education/Training (Know what education programs are available; where to get vocational training; etc.)	1 06	2 34	3 60
Needs & Opportunities (How to obtain information within the work environment to meet one's needs & to take advantage of opportunities)	1 07	2 34	3 59
Job Finding & Holding (How to identify and contact potential employers; etc.)	1 06	2 30	3 64
Behavioral Management (controlling anger at work;being on time; etc.)	1 07	2 17	3 76

Table 1 (continued)

Generative knowledge that cuts across life roles Knowledge of facts, concepts, procedures, rules & principles of basic:	Lo	Med	Hi
physical science	1	2	3
	17%	61%	22%
social science	1	2	3
	12	59	29
life science	1	2	3
	18	56	26
world & U. S. history	1	2	3
	19	43	38
world & U. S. geography	1	2	3
	18	53	29
U. S. government at federal, state & local levels	1	2	3
	11	50	39
literary thought	1	2	3
	22	47	31
art	1	2	3
	34	50	16
mathematics	1	2	3
	10	53	37
*Language: functional knowledge of 15,000 frequently used vocabulary words	1	2	3
	08	26	66
Generative Skills for Independent Action, Decision Making and Lifelong Learning			
Thinking about goals	1	2	3
	03	27	70
Managing and monitoring learning	1	2	3
	07	43	50

Generative Skills for Independent Action, Decision Making and Lifelong Learning (continued)	Importance Lo	Med	Hi
Scientific reasoning (focus on facts & evidence, not personal beliefs)	1	2	3
	10%	48%	42%
Thinking & reasoning (logical thinking; analysis & synthesis; etc.	1	2	3
	07	28	65
Generative Skills for Accessing & Voicing Information			
Computer Knowledge & Skill (keyboarding; word processing, etc.)	1	2	3
	07	42	51
Numeracy (Comprehension of math problems; computation; communicating math data, etc.)	1	2	3
	10	49	41
Literacy (reading;writing)	1	2	3
	02	15	83
Oracy (speaking; listening)	1	2	3
	02	26	72
Social & Interpersonal Interacting & Cooperation	1	2	3
	02	31	67

*Reasonable estimates from research are that typical high school graduates have a functional vocabulary size of 17,000-20,000 words.

Whether considered as an academic subject in Category 4.0 of Figure 19, or as a generative skill for accessing and voicing information (Numeracy) in Category 6.0 of Figure 19, mathematics was consistently rated as of only moderate importance by these 100 respondents.

The two NIFL purposes of literacy for (1) making decisions and acting independently, and (2) as a bridge to the future through lifelong learning were grouped together as generative skills in Figure 19 , Category 5.0, with three sub-categories of skills. In the CONSABE survey, however, sub-category 5.1: Thinking about goals; Managing and Monitoring

Learning were separated to form two separate categories for ratings (Table 1). The data of Table 1 show that 70 percent of respondents rated Thinking about goals as highly important, but only 50 percent thought Managing and Monitoring Learning was highly important. This might mean that in future work these two categories should be separated in Figure 19.

Only 42 of the 100 respondents rated Scientific reasoning as highly important. While two-thirds (65%) rated Thinking and reasoning as highly important. Again, this may mean that the categories of Scientific reasoning and Thinking & reasoning should be combined in future work to further define content standards for Adult Basic Education.

The New Draft Content Standards: The Beginning of a Process, Not the End

> Let no one say that I have said nothing new; the arrangement of the subject is new. ...I had as soon it said that I used words employed before. And in the same way if the same thoughts in a different arrangement do not form a different discourse, no more do the same words in their different arrangement form different thoughts!...Words differently arranged have a different meaning, and meanings differently arranged have different effects.
>
> --Blaise Pascal (1623-1662) Thoughts.

While not everything presented as the draft content standards for Adult Basic Education (ABE) in Figure 19 (page 34) is new, the figure does, at the very least, in the words of Blaise Pascal, arrange the discourse of content standards for ABE in a different manner. In this new arrangement, the draft content standards of Figure 19 seem to offer some new meanings and insights for adult basic education programs.

"Generativity" and the "Overlap" Issue. The Adult Performance Level (APL) and Comprehensive Adult Student Assessment System (CASAS) both used a matrix to represent the intersection of the skills of reading, listening, speaking, writing, computation, problem solving and interpersonal relations with the content areas of health, consumer education, occupational knowledge, etc. (see Figure 3, page 10). Both acknowledged the fact of interaction and overlap among the various skill and knowledge areas, but their choices of representation systems, matrices or lists, did not permit them to represent the idea of overlap. For instance, the column for Health did not cut across the column for Consumer Economics. As important as it is, there is no development of this "overlap" idea in these projects.

But there is clearly overlap in the words that are used in discussing both these areas of knowledge. At the very least, vocabulary words like "the," "of," "total," etc. are common across these knowledge areas. That is why Figure 19 includes among category 4.0 the sub-category of 4.2-knowledge of 15,000 vocabulary words and their derivatives. It is this vocabulary that cuts across, interacts with, and causes overlap among the various knowledge areas in Figure 19 (and in those of the APL and CASAS projects, too). Indeed, vocabulary is used in achieving all four of the purposes identified by the NIFL. It is used to *access* other's words and meanings, to *make decisions and independently voice* one's own knowledge, and to *generate* (*learn*) and communicate new knowledge.

To a very large extent, the 15,000 words , differently arranged as stated by Pascal, generate all of the knowledge areas identified in either the APL, CASAS or CONSABE projects. Further defining the role of vocabulary in Adult Basic Education and identifying the corpus of 15,000 words that adults should know will be a part of the future work of the CONSABE project. For now, it is appropriate to note that this focus on a core, *generative*

vocabulary in the CONSABE project is a new and important aspect of the definition of knowledge and skill that adults should know and be able to use that is not found in the present or earlier Adult Basic Education programs.

Moving Toward More "Contextualized" Programs. The APL, CASAS and other related projects reviewed in the CONSABE project discussed in their reports the importance of helping adults in their roles as parents and family members, citizens and workers, but *they did not use these roles as functional contexts within which they could organize and present their content areas.* Yet these three life roles offer the "contextual" frameworks advocated by the SCANS and other contemporary groups.

The organization of content standards in Figure 19 offers a different arrangement to the one currently used to represent the content of ABE in the San Diego Community College District, Continuing Education Division. Figure 19 organizes content around the three major life roles. Within each life role, there is content that will help people perform well in that life role. That is, the life roles provide a *functional context* for the teaching of the content within each role.

In contrast, the present ABE curriculum in the SDCCD/CE is organized into three levels, Beginning, Intermediate, and Advanced, and these levels are couched in the decontextualized language of the public school system. For instance, at the Beginning level, the catalog course description states:

> Development of basic skills of reading, spelling, writing, speaking, listening, and arithmetic for adults functioning at a beginning level (grade level 0-3, CASAS Reading below 200). Adults at this level have difficulty with basic literacy and computational skills necessary to function in employment and the community. Emphasis of instruction is placed on teaching the skills necessary to read, write and compute to solve problems in the areas of consumer economics, community resources, health, occupational knowledge, government and law. Upon completion and demonstration of competence at this level, students may be ready to succeed in the intermediate ABE class. A competency is considered complete when a student can demonstrate it, with 80% accuracy, orally, in writing or by actual performance.

The curriculum guide for the Beginning level of ABE then goes on to list 114 skills, sub-skills, and sub-sub-skills for reading, writing, and arithmetic and for health, consumer economics, etc. (note: a new version of the curriculum guides for ABE in the SDCCD/CE changes the skills somewhat to *infuse* SCANS competencies; but they remain essentially the same as the previous versions).

The way things stand now, the only formally presented higher order concepts that teachers and adult students alike can use to plan their learning goals and manage and monitor their learning (Content Area 5.1 in Figure 19) are the concepts of Beginning, Intermediate and Advanced levels of ABE. This does not provide much of a functional context for adult students to use to value the instruction and learning in which they are engaged. Indeed, this issue of "decontextualization" and the need for a change toward "contextual" learning as advocated by the SCANS is one of the factors that lead the SDCCD/CE to pursue the NIFL reform project.

The Importance of Behavioral Management. Though Adult Basic Education program curriculm guides frequently discuss the development of "interpersonal skills," the data from focus groups, student writing contests, and Table 1 (pages 37-38) suggest that there is a much greater concern for this type of "socialization" than present programs address. Repeatedly adults spoke of the importance of "good manners," "respecting others," "controlling tempers," "behaving appropriately for the situation," "controlling abusive behavior," "having ethics," "needing morality," and so forth. This is an important area for further development in the follow-on system reform activities.

The Four Purposes For ABE Identified by the National Institute for Literacy. In addition to emphasizing the importance of adult basic education organized by three major life roles, the NIFL also identified four major purposes that motivate adults to pursue adult literacy education: literacy for accessing information to orient oneself in the world, literacy for voicing one's thoughts and to be heard, literacy for making decisions in acting independently, and literacy as a bridge to the future by pursuing lifelong learning to keep up with the changing times.

The NIFL asked, "If we accept these four fundamental purposes as a touchstone for program quality, how does it change how we teach?" The answer requires some further analysis of the four purposes, beginning with the concept of "purpose" itself. A dictionary definition of the word "purpose" is given below.

> pur•pose (pûr2pús) n. 1. The object toward which one strives or for which something exists; an aim or a goal: "And ever those, who would enjoyment gain/Must find it in the purpose they pursue" Sarah Josepha Hale 2. A result or an effect that is intended or desired; an intention. [American Heritage Dictionary® of the English Language, Third Edition, 1992]

Essentially, a "purpose" is an aim or goal toward which one strives. Analysis of the way the NIFL has stated the four purposes reveals that in each case, there are two major parts to the statement (figure 21). One part is "literacy." The second part is the purpose itself, the aim or goal that literacy is supposed to help the adult student achieve.

Figure 21. Analysis of the NIFL's Four Purposes Into Major Components

Literacy		Purpose
Knowledge Base	Cognitive Processes	Metacognitive Goals
Content Knowledge & Information Processing Skills	Access Voice Decision-Making Learning	Orient Oneself Be Heard Act Independently Adapt to Change

Literacy itself can be divided into two major parts. One part is the knowledge base, which is everything that people know as content knowledge and procedures for doing things that they have stored in some way in their long term memory. The second part includes the cognitive processes, which occupy people's short term or working memory. The NIFL has expressed these processes as skills for accessing or voicing information, for decision-making, etc.

In the terminology of cognitive science, the NIFL statement of each purpose has two parts, a *cognitive* part that the general word "literacy" refers to and which includes the content knowledge and the information processing skills for accessing and voicing information, for making decisions and acting independently, and for learning, and a *metacognitive* part that forms the goal or intention (the "purpose") which the cognitive processes (access, voice, thinking,decision-making, learning) and knowledge are mobilized to achieve (figure 21).

In cognitive science, the word "metacognitive" refers to cognitive processes that guide or control or monitor other cognitive processes. That is what the NIFL four purposes do, they provide goals for adult students undertaking the study needed to develop their knowledge and skills, which are generically referred to as "literacy" that will help them achieve their goals.

From this point of view, the purpose of "literacy for making decisions and acting independently" has two parts, the cognitive (literacy) component [content knowledge and information processing skills of access, voice, decision-making, learning] and the metacognitive component [goal or intention] called "acting independently." In general, in addition to the functional context provided by the three life roles, the metacognitive goals provide another *functional context* that can motivate the person to participate and achieve in adult literacy programs. The goals or purposes also provide a way of monitoring ones progress toward the goal. They provide a means by which the person can determine whether what is being taught for them to learn matches their purposes for being in the program and is relevant to the achievement of their purposes/goals. The purpose provides a goal state for changing oneself from one's present state to a new state, e.g., from one whose voice is not heard to one whose voice is heard, from one who requires help in writing to one who can act independently and write one's own message, etc.

In Figure 19, the foregoing line of thought lead to the casting of the cognitive skills component of the four purposes as two major categories of generative skills. Category 6.0 includes the basic purposes of accessing and voicing information, while Category 5.0 is made-up of the purposes of making decisions and acting independently, and managing and monitoring lifelong learning.

To illustrate how the life roles and four purposes may interact in an adult student's life to motivate participation in adult basic education, we can imagine that someone may enter an adult basic education program and tell the intake counselor or teacher, "I want to get my GED so I can take an electronics technician's course. Then I can get a good, well-paying job." In this case, we can reason that the person is there wanting to focus on his or her life role of worker, with an emphasis on the purpose of "bridging to the future," that is, pursuing further learning (vocational training) after the adult basic education program. In this case, placing the person in a Vocational Adult Basic Education (VABE) program that teaches basic skills in the content context of the Life Role of Worker, and the specific content of electronics information may be a possibility. By helping the person achieve the purpose/goal of receiving the GED and bridging to the future via technical training, we help the person work toward fulfilling the life role of worker in the electronics field.

Issues for Future Work

In the NIFL *Equipped for the Future* report, the three life roles and four purposes for adult literacy education given in Figure 1 (page 2) were identified. In the CONSABE project, the task was to "flesh out" the matrix of Figure 1, to determine what the responsibilities of adults are in fulfilling the three life roles, and what they should know and be able to do to meet those responsibilities. This information was then used to develop the draft content standards for use in Adult Basic Education programs that are given in Figure 19 (page 34).

The Request for Proposals from the National Institute For Literacy defined "content standards" as "specific descriptions of the knowledge and skills that adults should learn and be taught." This raises the important questions of just how specific is "specific descriptions," and are the draft content standards of Figure 19 specific enough to offer guidance for the full-scale development of curricula for Adult Basic Education programs. These are questions that can only be resolved in future work as teachers, administrators, stakeholders and adult students attempt to work with the draft content standards.

In this regard it is important to keep in mind that the draft content standards of Figure 19 represent a *beginning of the process* of identifying content standards for Adult Basic Education, not an end. For one thing, there are seven other *Equipped for the Future* projects that have been working on developing content standards for various aspects of adult literacy education, and their work has not been available to the CONSABE project. However, this work will become available and can be used to modify the draft content standards of Figure 19.